

ALTERNATIVE ROUTE FOR THE ARIADNE-BULWER TRANSMISSION LINE

Eskom has proposed an alternative route for a section of the Ariadne-Bulwer transmission line. The Institute for Cultural Resource Management was approached to undertake an archaeological survey in order to identify and assess archaeological and other cultural sites that may be affected by the new route.

Prior to the survey I consulted the archaeological data base at the Natal Museum in order to determine whether any known sites existed in the area. The desktop analyses indicated that there has been no prior systematic archaeological survey in this area. I consulted Acock's (1975) vegetation map and the Geological Survey map to assess the probability of agricultural sites occurring in the area. The combination of the geology, soils and hydrology initially indicated that certain areas were archaeologically sensitive, especially for farming communities who are reliant on environmental factors. For example, in other regions Sweetveld grasslands (for grazing) with sandstone or dolerite outcrops (for building materials) appear to be the more favoured landscapes for Iron Age farmers. While the vegetation along this route is not ideal, it did suggest that Iron Age sites may occur.

LEGISLATION PERTAINING TO CULTURAL RESOURCES

Cultural sites are protected by various forms of legislation. The main legislation pertaining to archaeological, historical and palaeontological remains is the National Monuments Act No. 20 of 1969, Sect. 12 (2A)(a-f). This Act makes it an offence to damage, excavate, alter, or remove from its original site any archaeological, historical and palaeontological material, as well as human graves, without permission from the National Monuments Council. Permission is granted in the form of a permit, which may include restrictions regarding the development of that site. This restriction often necessitates some form of archaeological mitigation.

The National Monuments Act makes it clear that cultural sites older than fifty years, as well as palaeontological sites, require a permit if they are to be damaged or destroyed. Engineering activities are not excluded from this legislation. The only occasion a permit is not required for engineering activity, is if the cultural remains are to be moved from their original site. Nonetheless, an institute such as a museum or the National Monuments Council have to be informed prior to the removal of the remains, and preferably be on site during the removal. Failure to do so is an offence. 'Removal' and 'damage' are not synonymous actions.

DEFINITION OF AN ARCHAEOLOGICAL SITE

Archaeological sites have been defined using various criteria. I use the definition used by the Natal Museum for a recent project to determine site significance and predictive modelling (Wahl 1996). These definitions vary according to the type of site analysed, and are:

Stone Age:

"ten or more stone artefacts; or fewer than ten stone artefacts but which occur in association with other stone Age and/or Iron Age artefacts";

"other...artefacts" include art, beads, grinding stones, engravings, pottery, and places of spiritual/religious importance.

Iron Age:

more than "ten sherds, but [including] sites with fewer than ten sherds, but that occur in association with other Iron Age and/or Stone Age artefacts"; "other artefacts" include engravings, graves, grindstones, stone walling, settlements, and places of spiritual/religious importance (Wahl 1996:11).

DESCRIPTION AND ASSESSMENT OF ARCHAEOLOGICAL SITES IN THE STUDY AREA

A total of four archaeological sites were recorded in the study area and probably date to the last 200 years. Three of these sites are in the direct path of the transmission and will require some form of mitigation. These sites range from medium to high significance. The fourth site is outside the riute of the transmission line, and will not be affected. The location of these sites are given in Appendix A.

The recorded sites are homesteads with a cattle byre in front of the entrance of the house(s). By stone walled terrace I refer to a dry stone wall that supports a terrace, and is often associated with household features.

Site 1:

The site consists of a main cattle byre (10m x 10m) that is constructed with dry stone walling. To the west of the byre are three circular features ranging from 5m to 7m in diameter, that may be the remains of smaller byres, or houses. A stone cairn is located 15m east of the main byre and may be the remains of a human grave. The stone walled terrace has the remains of one, possibly two, hut floors to the south of the main byre. One of the hut floors has settled, suggesting the presence of subsurface features and a cultural deposit.

The possible human grave and cultural deposit makes this site of medium-high significance and it would require mitigation if affected. The impact of an electricity pylon on this site would be high negative.

Site 2:

The second household is located to the south of Site 1. It consists of a cattle byre, circular features and a stone walled terrace. The cattle byre is approximately 10m x 10m and is made in the dry stone walling fashion. The wall is 1m thick and may have stood 1.5m high. There are two stone walled terraces to the south of the byre. The first stone walled terrace is 15m wide and the second terrace that is 10m wide, and both are 20m to 30m long. The second terrace has the settled remains of two circular features, each 7m in diameter. Each feature on the terrace has a settled area, suggesting subsurface features and possibly a cultural deposit.

The potentially well preserved cultural deposit, and stone walling make this site of high significance and it would require mitigation if affected by the transmission line. The impact of an electricity pylon on this site would be high negative.

Site 3:

This site is of the same scale and spatial layout as Site 2, except that the cultural deposit does not appear to be as well preserved, or have the same quantity of deposit. The terrace has a sunken floor.

The site is of medium significance and would require mitigation if it is to be affected by the transmission line. The impact of the transmission line would be high negative.

Site 4:

This site consists of four dry stone wall features, four terraces with circular features, circular features, and a stone cairn. These structures are located near the top of the hill and face roughly southwards towards Sites 1-3.

The stone walls are made in the dry stone walling fashion and are from locally available raw material sources. The western most stone wall has a total length of 40m; however, at the 20m mark on the southwestern side it forms a 20m X 10m rectangle facing northwards. There appears to be a doorway, or gate, at the northwest, or upslope, side of the byre. To the west of the wall is a circular feature. North of the stone wall is a stone walled terrace with two circular features, each 5m in diameter. To the east is a circular sunken feature, 5m in diameter. These features are probably the remains of huts, and all have potential archaeological deposit.

Approximately 45m to the east is another set of stone walled byres and terraces. The easternmost byre is 7m in diameter, and is not as well preserved as the other walled features. Further east is a rectangular, 18m X 5m, dry stone wall cattle byre with a stone cairn near the western corner. This cairn is probably a human grave. To the north of these structures is one stone walled terrace with a sunken feature and possible cultural deposit. To the east is another sunken circular feature, 5m in diameter, with a cultural deposit. East of this feature is another stone walled terrace with a sunken circular feature.

This site may date to the Late Iron Age, or early Historical Period because of the byre entrance that faces upslope. Moreover the spatial layout of this site is well defined and several cultural deposits were observed. The site is of high archaeological significance and no impact should occur at this site without proper archaeological mitigation. The impact of the transmission line on this site would be low.

DISCUSSION AND MITIGATION

The three sites that may be affected by the erection of electricity pylons range from medium to high significance. Their high significance is due to relatively well preserved features and structures. The fourth archaeological site is of high significance, however it is unlikely to be affected by the transmission line. These sites have the potential to provide research information, since little is known of the Iron Age south of the Pietermaritzburg-Durban line. Furthermore, these three houses may be temporally related. That is, they may have been occupied at the same time and probably by the same extended family. These sites, especially the cultural deposits, may thus yield information regarding variation in material culture between family units in a given time period.

The mitigation required for each site is as follows:

- 1) Map all features at the site. Place a test pit in each circular feature and the cattle byre to determine the extent of the deposit. If a large deposit exists, further excavations will need to occur. Each hut floor will need a test pit excavation and if a large cultural deposit exists to determine the

possibility of subsurface features. Attempt to trace living relatives of deceased to whom the cairn belongs, if it is indeed a human grave. The local community should be consulted prior to any exhumations.

- 2) Map all features at the site. Place a test pit in circular features and the cattle byre to determine the extent of the deposit. If a large deposit exists, further excavations will need to occur. The hut floor(s) will need test pit excavations to determine the possibility of subsurface features.
- 3) Map all features at the site. Place a test pit in circular features and the cattle byre to determine the extent of the deposit. If a large deposit exists, further excavations will need to occur. The hut floor(s) will need to be excavated to determine the possibility of subsurface features.
- 4) This site should not be affected by the transmission line, and no mitigation is necessary.

Mitigation would only be required if the electricity pylons were to directly affect these sites. However, given the distance between each site and the known location of archaeological sites, the construction of the pylons should not have to affect the sites. The location of these sites should thus be included in the management plan of the transmission line. The construction of servitudes should also be considered and not affect the sites.

The extent of each archaeological sites should be clearly marked prior to construction. This would enable the sites to be clearly visible and thus avoided.

CONCLUSIONS

The archaeological survey of a new section of the Ariadne-Bulwer line located four previously unrecorded archaeological sites. These sites probably date within the last 200 years and represent Iron Age farmers from the Historical period, or possibly the Late Iron Age.

Three of the four sites may be potentially affected by the transmission line and a management plan and mitigation is required. I suggested that it would be easier, and perhaps more cost effective, to avoid the sites. This may be achieved by having the pylons placed between the archaeological sites. I also suggested that the sites are marked out before construction begins so as to avoid unwitting damage to the sites.

Acocks, J. 1975. Veld types of South Africa, 2nd ed. *Botanical Survey of South Africa Memoir* **40**: 1 - 128.

Wahl, B. 1996. *The construction of an archaeological sensitivity model for KwaZulu-Natal, South Africa*. Report on a project commissioned by the Department of Environmental Affairs and Tourism.

APPENDIX A

GPS LOCATIONS OF ARCHAEOLOGICAL SITES

Site 1: S29⁰ 43' 22"; E30⁰ 10' 21"

Site 2: S29⁰ 43' 18"; E30⁰ 10' 39"

Site 3: S29⁰ 43' 16"; E30⁰ 10' 21"

Site 4: S29⁰ 42' 41"; E30⁰ 10' 25"

These co-ordinates are to be treated with confidentiality.