ARCHAEOLOGICAL SPECIALIST REPORT

DESKTOP ASSESSMENT OF POSSIBLE ARCHAEOLOGICAL RESOURCES ALONG THE PROPOSED 400 KV TRANSMISSION LINE ROUTE HELIOS TO AGGENEIS NORTHERN CAPE

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Introduction

This desktop assessment for Walmsley Environmental Consultants, by appointment by Eyethu Engineers CC, seeks to indicate the overall archaeological, historical and cultural importance of the area, and recommends on-the-ground inspection of parts of the powerline route that may be of greatest sensitivity.

The region has been only very sparsely investigated in the past so that inspection of selected places along the route is essential. Site reports and collections from sites in the general vicinity, summarised in this report, show that the area does boast a broad spectrum of stone age sites reflecting Acheulean to Ceramic Later Stone Age occupation, which may be focused in certain parts of the landscape to be traversed by the line. In historical times the area was used by Khoisan, Basters and white Trekboers and there are records for the area by such nineteenth century travellers as George Thompson and E.J. Dunn.

The route

The sketch map supplied by Walmsley indicates a linear development extending directly between Helios substation east of Klein Rooiberg, 60 km from Loeriesfontein, to Aggeneys substation, traversing a distance of some 155 km.

The terrain is generally flat, but from the information supplied it is clear that the line is likely to go over certain hills (eg. at the north eastern corner of the farm Nombies) and through vleis (eg. Galputs in the Koa River Valley). It is anticipated that there could be up to 2 km deviation either side of the straight line route, depending on sensitive areas identified during scoping (G. Wray pers.comm. 13 July 2000).

Geologically the substrate is predominantly Quaternary sediment including dunes in the north, with Karoo shales and dolerite in the south.

The region is arid and was certainly peripheral to major human occupation over long periods of time, but climate change could have made it more attractive at some periods, while population pressure in the last 2000 years probably forced marginalised hunter-gatherers into the area (Beaumont *et al.* 1995). Features in the landscape such as small inselbergs, outcrops of rock, dunes, and depressions, offering a variety of shelter, raw materials, and water and food sources, would have been foci of past human activity. Further to the east, in the Upper Karoo, high points with dolerite exposures were places where rock engravings were made in Later Stone Age times (Morris 1988).

Archaeological and historical background

The geologist E.J. Dunn described artefacts in the region in the 1870s, having also met with /Xam San who still manufactured flaked stone tools. At Klavervlei, east of the proposed powerline, he mentioned "the enormous quantities of broken (ostrich) egg-shells...[which]...create astonishment, and convey some rough idea of the numbers of Bushmen and the length of time they must have lived in this neighbourhood" (Lewin-Robinson 1978:64).

While several sites were documented and sampled in the region in the early 1980s (P. Beaumont & D. Morris, McGregor Museum), these records remain pitifully meagre and inadequate for determining a baseline description of the transmission line route or the likely impacts of the proposed line. They do provide evidence for the existence of sites in this terrain and underscore the need to check sensitive portions of the landscape through which the proposed powerline is to run. Details of the sites are summarised below.

Further afield, archaeological research has been focused on mainly Later Stone Age and rock engraving sites in the Upper Karoo to the east (eg. Deacon 1988; Morris 1988; Beaumont & Vogel 1989; Beaumont & Morris 1990); along the Orange River to the north (eg. Morris & Beaumont 1991; Beaumont *et al.* 1995; Smith 1995); in the vicinity of Gamsberg (Morris 2000a; 2000b); and along the west coast including the important Spoegrivier cave site with early evidence of pastoralism (eg. Webley 1992).

The early colonial history of the region, when land and resources were becoming highly contested in a frontier context, is broadly detailed by Penn (eg. see Penn in Smith 1995).

Known sites in the vicinity

Table 1 lists relevant collections and field reports held by the Archaeological Data Recording Centre at the McGregor Museum, Kimberley (MMK).

Table 1

Site Name	Sitecode	MMK Accessions and records
Nam Reens se Pan	2918DC2A	6847 Arch colln
Suurwater	2918DC2B 2918DC2C	6556 Arch colln 6557 Arch colln
Leeuklip se Kop	2918DD2D 2918DD2C 2918DD2D	6743 Arch colln 6833 Arch colln 6834 Arch colln
T'Auseb	2918DD2A	6846 Arch colln
Vaaloog	2918DD2B	6848 Arch colln

Maans-Pannen	2918DD2E	6842 Arch colln
Bosluis	2918DD2F	6859 Palaeoenv sample
Bitterputs	2918DD2G 2918DD2G	6567 Arch colln 6568 Arch colln
Beeskeur se Vlei	2919CA2A	6841 Arch colln
Oorstoot se Vlei	2919CC2A	6849 Arch colln
Water Kuil	3019BA2A 3019BA2B 3019BA2C 3019BA2D	Site report only Site report only Site report only Site report only
Klawervlei	3019BB2B 3019BB2B 3019BB2C 3019BB2D 3019BB2E	6780 Arch colln Site report only 6781 Arch colln 6782 Arch colln 6783 Arch colln
T'Boop	3019BB2A	6785 Arch colln

Site details

Findings at the 24 sites reflected in Table 1 are summarised as follows:

Nam Reens se Pan

Site 1: 2918DC2A: Ceramic Later Stone Age. Some of the pottery has grass filler. A lug was found, typical of Khoi herder pottery. Stone tools included backed pieces. MMK 6847.

Suurwater

Site 1: 2918DC2B: Later Stone Age, on red dune - included ostrich eggshell and upper grind stone. MMK 6556.

Site 2: 2918DC2C: Acheulean and Middle Stone Age, on flats adjacent to dune. MMK 6557.

Leeuklip se Kop

Site 1B: 2918DD2D: Ceramic Later Stone Age material together with porcelain fragments. MMK 6743.

Site 1: 2918DD2D: Excavation in small shelter (with paintings, cupules and grooves), yielding a Ceramic Later Stone Age industry, including thin pot sherds, and sherds with grass temper. Glass pieces and glass beads also found. MMK 6834.

Site 2: 2918DD2C: Middle Stone Age-Later Stone Age transitional material. MMK 6833.

T'Auseb

Site 1: 2918DD2A: Site on side of vlei with Ceramic Later Stone Age including backed pieces, pottery with grass temper, and ostrich eggshell beads. MMK 6846.

Vaaloog

Site 1: 2918DD2B: Site on side of vlei with Middle Stone Age as well as Ceramic Later Stone Age MMK 6848.

Maans-Pannen

Site 1: 2918DD2E: On margin of pan, Earlier Stone Age material on material derived from the Dwyka tillites. MMK 6842.

Bosluis

Site 1: 2918DD2F: Palaeoenvironmental sample: shells for dating and palaeoclimate reconstruction. MMK 6859.

Bitterputs

Site 1: 2918DD2G: In gully near pan, an assemblage of Middle Stone Age and Later Stone Age. MMK 6567.

Site 2: 2918DD2G: Ceramic Later Stone Age near boulders on the edge of the pan. MMK 6568.

Beeskeur se Vlei

Site 1: 2919CA2A: Ceramic Later Stone Age with abundant pottery, backed pieces, stone pendant. MMK 6841.

Oorstoot se Vlei

Site 1: 2919CC2A: On side of small vlei, Middle and Later Stone Age material. MMK 6849.

Water Kuil

Site 1. 3019BA2A: A high-density surface artefact scatter on aeolian dune verging on the Soutvloer pan. Ceramic Later Stone Age with flakes, blades and backed pieces on exotic raw materials. Pottery includes sherds with grit and some with grass temper.

Site 2. 3019BA2B: An extensive surface artefact scatter straddling the northern margin of the dune. Material similar to Site 1.

Site 3. 3019BA2C: The cluster of numerous surface artefact scatters on side of dune

facing the pan. Material similar to Site 1.

Site 4. 3019BA2D: An extensive surface artefact scatter on sandy areas near windmill/spring. Material similar to Site 1.

Klavervlei

Site 1A: 3019BB2B: A Later Stone Age surface scatter on red sand flanking a hill and bordering the western side of the pan: with backed pieces, ostrich eggshell beads, but no pottery. MMK 6780.

Site 1B: 3019BB2B: In a similar setting: Middle Stone Age artefacts noted but not sampled.

Site 2: 3019BB2C: Later Stone Age surface scatter on orange sand in depression between ridges: with blades, backed pieces, ostrich eggshell beads and pot sherds without grass inclusions. MMK 6781.

Site 3: 3019BB2D: Site on upper margin of unconsolidated orange dune sand overlooking the east side of the pan. A large quantity of ostrich eggshell fragments and a few Later Stone Age stone artefacts. MMK 6782.

Site 4: 3019BB2E: Site in hollow near crest of orange dune ridge bordering the south of the pan: Later Stone Age with backed pieces, but no segments or endscrapers, and with refined grit-tempered ceramics. MMK 6783.

T'Boop

Site 1: 3019BB2A: A site on a small calcified dune at the northern end of the pan: a total collection over 12 X 12 m yielded 41 terminal Middle Stone Age artefacts of jasperlite, and 536 ostrich eggshell fragments (2 decorated). This association of ostrich eggshell with MSA represents an exceptionally early occurrence of eggs being used probably as water flasks, and of their decoration, at perhaps c 60 000 years BP. MMK 6785.

Discussion

Despite the paucity of records, these sites do show that a broad spectrum of Stone Age and frontier period history is reflected in the archaeology of the region. The sites are broadly similar to the range of sites recorded in the Gamsberg/Aggeneys area, and in the Upper Karoo to the east, though their densities may vary.

Acheulean material is poorly documented in the western portions of the Northern Cape (Sampson 1974; Volman 1984; Beaumont *et al.* 1995), so that any further finds would be significant. The preservation of ostrich eggshell in open settings like the T'Boop fossil dune, where it is in association with Middle Stone Age artefacts, is remarkable. Some of these Pleistocene sites may well represent occupation during periods of significantly higher rainfall in the area.

Later Stone Age sites noted in the area, predominantly of late Holocene age, appear

to reflect *inter alia* an interface between a foraging presence (pre-pottery, or without access to pottery, or limited access) on the one hand, and a pastoralist occupation (with pottery, often abundant on herder sites) on the other. Episodes of higher archaeological visibility could correspond with past periods of environmental amelioration, eg. the `Little Ice Age' when much of the Karoo appears to have enjoyed higher rainfall. It is also possible that there was increasing occupation of environmentally less desirable areas in the last 2000 years due to marginalisation of hunter-gatherers following the advent of herding in the north and west (Beaumont *et al.* 1995). In addition, it is known that herders sought water sources further afield from their major stations (such as Pella) during dry periods (Thompson 1827 - see Morris 2000b for discussion).

The archaeological signature of Baster and white Trekboer occupation would probably mirror that of precolonial herders, with limited permanent settlement beginning only in the twentieth century. Indications of this frontiersman presence are visible in the sites reviewed above (eg. glass and porcelain items on sites near water sources).

Any further finds in this area would be regionally significant on account of the paucity of existing information. The late Holocene sites in particular may reflect the heritage of existing populations in the region.

Recommendations

It is clear from the above that, while archaeological visibility in the region is likely to be low, there is a good chance that the proposed powerline would intersect archaeological sites. The positioning of towers on such sites could have a high negative impact on archaeological resources that may be both highly localised in a hostile terrain, and rare.

It is difficult to assess from maps which parts of the route are likely to be more sensitive, but it is proposed that inspections should be undertaken at the following kinds of locales: on ridges/hills/rocky outcrops; across the Koa Valley dunes; and, especially, on the margins of pans and small vleis.

Table 2 identifies locales per 1:50 000 sheet that should be examined more closely.

Table 2.

Map sheet	Features requiring closer inspection
2918BD	• Hills at the southern end of the farm Aggeneys/north west Nombies. There is a major herder site a few kilometres east of the proposed powerline route on Aggeneys (see Morris 2000b). • Vlei on Hartebeest Vlei.
2918DB	• Vicinity of Banke.
2919CA	• The margins of Galputs Pan. • Dunes in the Koa Valley.

2919CC	• Neels se Duin. • Small vlei on the farm Gifkop. • High ground on the farms Bitterputs and Vars-Kaip.
3019AA	• Small vleis on Gifkop
3019AB	• Kaiinglaagte and associated ridges • Small vleis on Gifkop and Gras Koppies
3019AD	• Small vleis on Graskoppies • Hills/high ground on Vyeboskop and Sprinbok Tand/Bloupan.
3019BC	-
3019DA	• Leegte on Klein Rooiberg.

Conclusion

This desktop survey has sought to assess overall archaeological and historical importance of the area; and to identify places warranting closer inspection. The existing database for the area is far from adequate, but a review of the records gives a broad overview of archaeological and historical resources that can be anticipated.

An adequate baseline description and recommendations with regard to the route of the transmission line and any possible mitigation measures can be written once site inspections have been completed. Information from the completed study should be made available to local communities and should also be reflected in the proposed museum at Gamsberg.

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