PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT ON THE CONSTRUCTION OF 50 KM OF LOOP ROADS ON THE FARMS ADDO HEIGHTS [209], LISMORE [208], ZOUTE FONTEIN [210], NIEU JAARS KOP [300] AND OLIPHANTS PLAAT [214] WITHIN THE SOUTHERN SECTION OF THE ADDO ELEPHANT NATIONAL PARK, EASTERN CAPE

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EXECUTIVE SUMMARY

A number of loop roads, designed for game viewing, as well as a picnic site, are planned for the farms which have been incorporated into the southern section of the Addo Elephant National Park. Reports of scatters of stone artefacts have been reported from this area during previous surveys. An Archaeological Impact Assessment survey was conducted in this area on the 13 November 2007. Ephemeral scatters of stone tools (of an inconclusive Early or Middle Stone Age date) were found in selected areas of the route. It seems that these diffuse scatters are very widespread, occurring to the south as far as Coega, north to the farm Glenmore, and west to the town of Addo and the Sunday's River. They do not appear to be *in situ* and they are not associated with any other archaeological material. Previous surveys have suggested that they may have resulted from previous river action. These scatters are of very low significance and no mitigation is required. It is recommended that the discovery of any associated bone should be reported immediately.

INTRODUCTION

In the course of the expansion of the Great Addo Elephant National Parks (GAENP), SAN Parks have acquired a number of farms to the south of the existing Park (between Addo Heights and Colchester). In 2003, Webley undertook three Archaeological Impact Assessments in the southern section of the Park. These included the development of a new rest camp at the southern gate (called Matholweni); the southern access road from just north of Colchester to Peasland and the construction of the connecting road from Peasland to Spekboom. The distance from Spekboom, across the Addo Heights road to Peasland, and then onto the gate at the southern entrance near Colchester is approximately 27km (Figure 1).

While this area has been incorporated into GAENP the fences have not yet been completed and therefore game has not been introduced. SAN Parks intends to construct 7 loop roads in this section, to join up with the main north-south road from Spekboom to Colchester. The total length of these loop roads will be 50 km. They also plan to develop a picnic site in an old gravel pit which was used during the first road development of the park.

TERMS OF REFERENCE

Dr L Webley was requested to undertake a Archaeological Impact Assessment of the impact of the construction of 50 km of new loop roads, as well as the picnic site, in the southern section of the Addo Elephant National Parks.

- Conduct a site visit to the various areas
- Determine whether there are any archaeological resources in the identified areas and what the significance of these resources might be
- Recommendations on how to protect sites/exclude sites for development

NATIONAL HERITAGE RESOURCES ACT No 25 OF 1999

In terms of the National Heritage Resources Act (No. 25 of 1999) all archaeological objects, palaeontological material and meteorites are the property of the State. Any

persons who discover any of these materials in the course of development must immediately inform the responsible heritage resources authority. No person may, without a permit issued by the responsible heritage authority destroy, damage, excavate, alter, deface or disturb any archaeological sites and material, palaeontological sites and meteorites.

With regard burial grounds and graves, Section 36 (3) of the Act clearly stipulates that no person may, without a permit issued by the relevant provincial heritage authority or SAHRA, (a) destroy, damage or exhume the grave of the victim of conflict; (b) destroy, damage or exhume any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority. With regard subsection 3 (b), SAHRA may not issue a permit for the destruction of a grave or burial ground unless it is satisfied that the applicant has made a concerted effort to contact and consult communities and individuals who by tradition have an interest in such grave or burial ground, and reached an agreement with such communities about the future of such grave or burial ground.

Subject to the provision of any other law, any person who in the course of development discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the relevant heritage authority which must, in co-operation with the South African Police Service and in accordance with the regulations of the responsible heritage authority, carry out an investigation to determine whether the grave is protected in terms of the Act or is of significance to any community. If the grave is protected or of significance, they should assist the community to make arrangements for exhumation and reburial or, in the absence of such person or community, to make arrangements as it sees fit.

Section 34 of the Act stipulates that 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.

Section 38 of the Act clearly indicates that any person constructing a road or similar linear developments exceeding 300m in length or developing an area exceeding 5000 square metres in extent is required to notify the responsible heritage resources authority or SAHRA. SAHRA will in turn advise whether an impact assessment report is needed before development can take place.

Living heritage (defined in the Act as including cultural tradition, oral history, performance, ritual, popular memory, skills and techniques, indigenous knowledge systems and the holistic approach to nature, society and social relationships) is also given protection under the Act. Section 24 of the Act makes provision for provincial heritage resources authorities to maintain a register of heritage resources and to set up management plans for their preservation.

ARCHAEOLOGICAL BACKGROUND TO THE AREA

A pilot survey in 2002 of heritage sites in the GAENP indicated the presence of an open Middle Stone Age site in a red gravel donga exposure on the farm Glenmore on

the Addo Heights (Figure 1). The artefacts comprised mainly quartzite and silcrete flakes and flaked cobbles. There was one possible Early Stone Age handaxe.

In addition, Early and Middle Stone Age (see terminology) scatters have been found on the banks of the Sundays and Bushman's Rivers in the past. They are found immediately below the top soil, down to a depth of 30cm. They are generally invisible, except on occasions when they are exposed in river cuttings and dongas. They appear to be randomly distributed in the top red gravels. The majority of artefacts consist of flaked cobbles (with cortex) and quartzite flakes. There are very few diagnostic flakes. The extent of the scatters suggests that they are widely distributed and that they are not *in situ* but have been distributed by river action in the past. These red gravels are part of the Kinkelbos Formation, which is part of the Algoa Group, and these river terraces are geologically of recent origin (some 3 million years).

The three surveys in 2003 revealed a number of stone artefact distributions in the area. The first survey of the farm road from the southern entrance of the Park to Oliphants Plaat crossed a number of gravel exposures which contained flaked stone tools, including one ESA handaxe. The second survey of the rest camp (comprising a number of chalets), constructed in the southern section of the farm Oliphants Plaat, also revealed quartzite flakes in a very large erosion donga running vertically down a steep slope near the new camp. The third survey also discovered distributions of quartzite and silcrete flakes, some lying on calcrete surfaces. In both the second and third surveys, a single weathered MSA flake was identified.

RESULTS OF THE SURVEY

The area was visited on 13 November 2007 together with Ilse Welgemoed who is responsible for the Colchester area.

Loop 4 (17km):
This loop extends in a westerly direction from the main north-south access road (Figure 2). It travels through extremely dense bush. The bush has not yet been cleared for the road, and we followed existing farm roads and cut lines in this general direction. There are quartzite cobbles and flakes cobbles to be found wherever the road crosses a calcrete surface. Since these "flakes" are found in the road, it is not always clear if they are the result of human action or due to vehicles moving over the quartzite cobbles. A number of GPS readings were taken along Loop 4. The readings presented below do not represent ALL the distributions of stone tools. However, they give an indication of the frequency of distributions found.

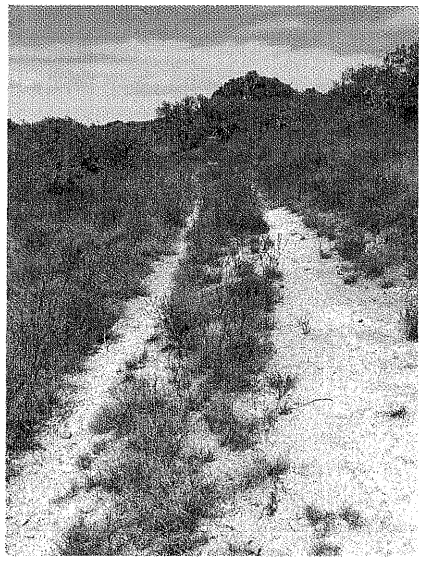
Fig. 3: Loop 4 road.

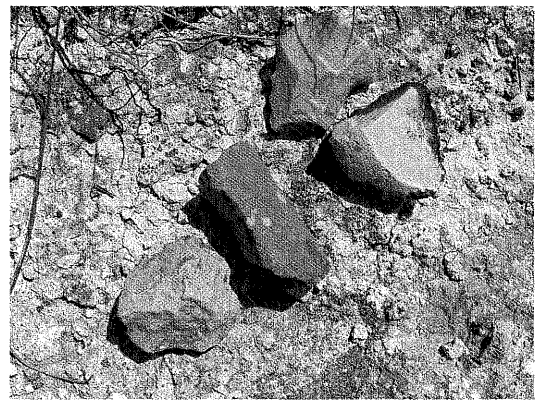
Fig. 4: Stone artefacts in the road.

S 33°35'47,8"
E 25°47'50,3"

S 33°36'37,7"
E 25°46'14,4

S 33°36'52,3"
E 25°45'47,7"

S 33°37'05,7"
E 25°45'23,4"

S 33°37'54,1"
E 25°45'18,6"

Loop 2 (2,5km):
We started Loop 2 from the Peasland farmhouse, travelling south along an existing farm road, for less than a kilometre across open grassland (Figure 2). We were not able to complete the loop as the southern section has not yet been constructed through dense thicket. No stone artefacts were found in this area.

Loop 3 (13km):
We started Loop 3 at the Peasland farmhouse and travelled first east, and then north. We travelled as far as the Wavy Ridge farmhouse. Beyond this farmhouse, the road (according to the map) crosses into the neighbouring farm. We were unable to proceed beyond Wavy Ridge as the road has not yet been constructed. No stone tools were found in the existing farm roads.

Loop 5 (7,3km):
This loop has not been constructed. We travelled down the cut line. The area to the north of the cut line is grasslands, while the area to the south is dense thicket. The loop turns at a small valley (called Soutkloof), and at the end of this loop, the cut line crosses a concentration of quartzite flakes and cobbles:

S 33°38'05,1"
E 25°48'45,3"

Loop 1 (6km):
We parked at the southern entrance of Loop 1. There is no road, just a footpath in the bush. It is intended to widen the footpath into a road.


Fig. 5: Loop 1 with scatters of stone tools at the start of the footpath.

(a) The footpath commenced at:

S 33°39'55,1"
E 25°48'47,9"

(b) And we walked until:

S 33°39'48,2"
E 25°49'09,9"

There are a number of quartzite flakes in the footpath between (a) and (b). However, after (b) the scatters of stone flakes disappear as the soil changes colour and texture.

Loop 6 (900m) and Loop 7 (900m):
We were unable to follow either of these short roads as neither had been cut through the bush. We were only able to view the entrance to these roads from the southern access road.

Picnic Site

S 33°30.958
E 25°49.702

The picnic spot is very disturbed, having been used initially as a gravel dump and subsequently as a parking area and there are no archaeological remains in or around the area.

SOURCES OF RISK AND IMPACT IDENTIFICATION

Many of the loop roads indicated in Figure 2 have not yet been cut through the bush and it was not possible to follow their exact route. However, I am of the opinion that, while we were not always able to travel on the exact road, this is not likely to effect the results of the survey. The survey has indicated a general pattern to the distribution of the stone tools and this may be used to predict possible localities.

No dense concentrations of stone tools were found during this survey, and the results mirror those of the three surveys conducted by Webley in 2003. It appears that stone tool distributions are found beneath the soil surface throughout the area and are generally exposed by road cuttings, dongas and sometimes found concentrated on calcrete outcrops.

ASSESSMENT OF SIGNIFICANCE AND POSSIBLE MITIGATION

Stone tool scatters were never very dense, in the majority of cases numbering about 5 – 10 flakes or flaked cobbles. They were generally on quartzite and rarely on silcretes.

Some flakes had a clearly defined prepared striking platform, suggesting a possible MSA origin. However, in the majority of cases the flakes were undiagnostic and it was not clear whether they belonged to the ESA or MSA. In some cases it is even possible that the split cobbles may be due to natural flaking in old river beds.

Due to the fact that the scatters are randomly distributed and that they have little information potential, it seems unlikely that the loop roads will impact significantly on them. Mitigation is not really possible. There seems to be no reason to collect the stone tools from the surface and they have limited information potential. Excavation of the stone scatter areas is unlikely to increase our knowledge of this time period.

RECOMMENDATIONS DURING THE CONSTRUCTION PHASE

No archaeological remains of any significance were found during the survey. It is recommended that the construction of the 7 loop roads and the picnic site may continue if the following guidelines are followed:

Every care should be taken during the bulldozing of the roads, especially in those areas where dense thicket made surveys impossible. Buried sites may be uncovered which were not visible during the survey. The developers should look out for the following:

1) Concentrations of stone tools in association with bones;
2) Any graves;
3) Concentrations of shell (fresh-water mussel middens)
4) Any historical material (such as blue and white china) which may indicate historical occupation.

If any of the above is discovered, further development of the property must stop immediately and archaeologists as well as the South African Heritage Resources Agency should be contacted to determine the significance of the discovery.

TERMINOLOGY

Early Stone Age: the earliest stone tool assemblages date from around 1,7 million years ago. By around 1,5 million years distinctive stone tools called handaxes appear and seem to coincide with the appearance of Homo erectus peoples. These stone tools were made in the same pattern up until around 125 000 years ago.

Middle Stone Age: these tools consist mainly of long blades or triangular flakes and reflect a more controlled use of flaking properties than during the ESA. These tools are frequently made on fine-grained raw materials such as silcretes. These tools date between 125 000 and 40 000 years ago. In some cases, bone and marine shell have been found together with MSA implements.

REFERENCES

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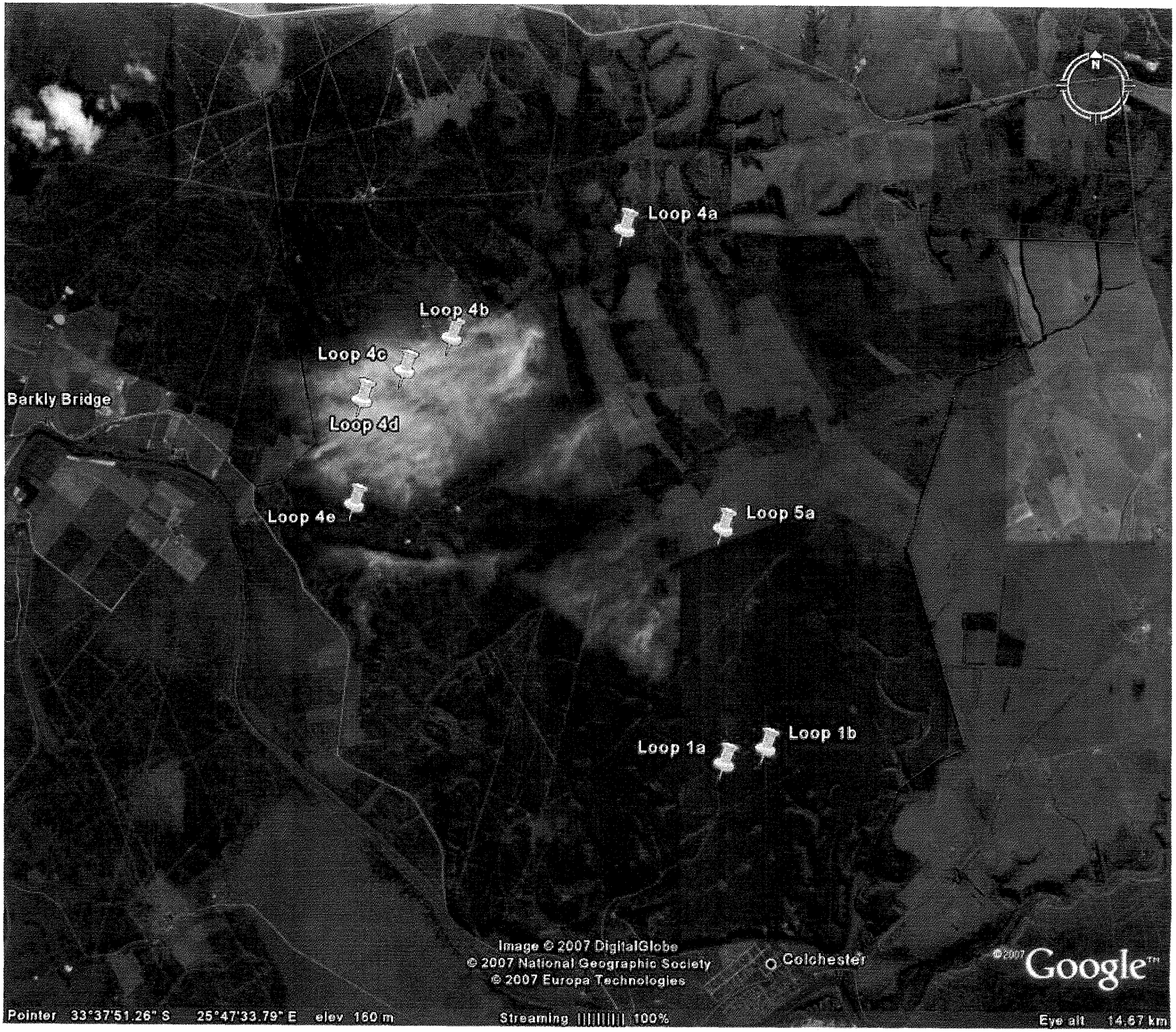
Webley, L. June 2003. Addo Elephant National Park: upgrading of existing tourist road network and construction of southern access road near Colchester – Phase 1 Archaeological Impact Assessment.

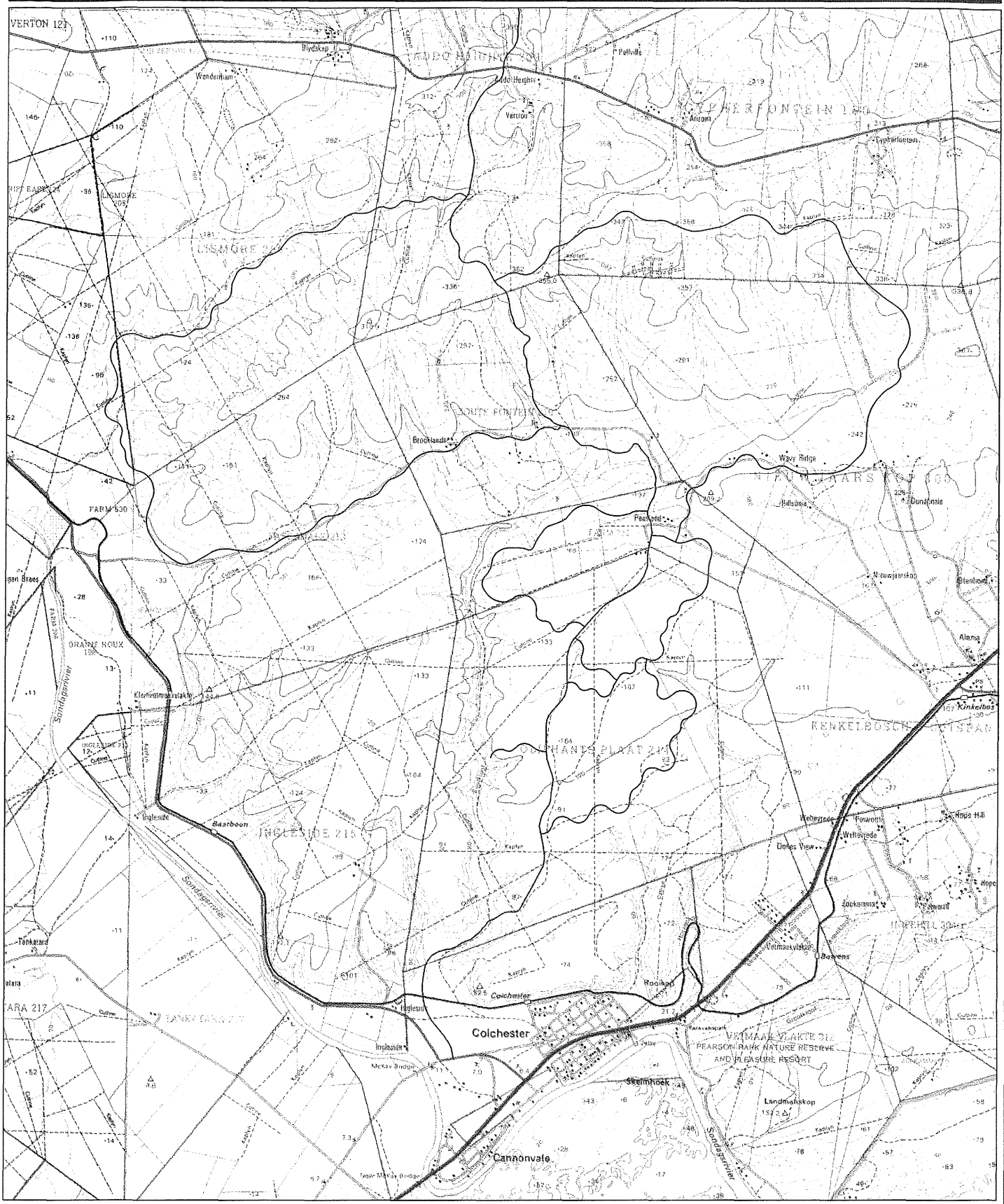
Webley, L. August 2003. Addo Elephant National Park: Construction of rest camp area in the southern section of the Park – Phase I Archaeological Impact Assessment.

Webley, L. October 2003. Addo Elephant National Park: Construction of the southern access road between Spekboom and Peasland – Phase 1 Archaeological Impact Assessment.


Picnic site
33 30.958 S, 25 49.702 E
Addo
Loop 4a
Loop 4b
Loop 4c
Loop 4d
Loop 4e
Loop 5a
Loop 1a
Loop 1b
Colchester
Image © 2007 DigitalGlobe
© 2007 National Geographic Society
© 2007 Europa Technologies
Image © 2007 TerraMetrics
Streaming 100%
Google
Pointer 33°36'41.14" S 25°49'06.96" E elev 196 m
Eye alt 29.96 km


Loop 4a
Loop 4b
Loop 4c
Barkly Bridge
Loop 4d
Loop 4e
Loop 5a
Loop 1a
Loop 1b
Colchester
Image © 2007 DigitalGlobe
© 2007 National Geographic Society
© 2007 Europa Technologies
Google™
Pointer 33°37'51.26" S 25°47'33.79" E elev 160 m
Streaming 100%
Eye alt 14.67 km

ADDO ELEPHANT NATIONAL PARK
PROPOSED GAME VIEWING ROADS IN SOUTHERN PORTION



LEGEND:

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MAP SHEETS : COLCHESTER 3325 DA
ADDO 3325 DB