10. ARCHAEOLOGY

The archaeological survey was undertaken by Mr J Kaplan of the Agency for Cultural Resource Management in his capacity as a heritage specialist.

10.1. Introduction

According to Dr Binneman (Pers. comm.), the receiving environment for the proposed project is not considered to be archaeologically sensitive, vulnerable or threatened.

However, it should be noted that large numbers of well-preserved animal fossil bones have been found in calcrete and clay deposits in the Aloes area near Port Elizabeth (Gess 1969). The variety of bones, teeth and horn-cores, as well as the presence of possible bone tools suggests that prehistoric people deposited them. The Aloes footprint has been dated to 37 000 years BP (Gess 1969:31).

10.2. Scope of Work

The archaeological survey was required to undertake the following:

- Determine whether there are likely to be any archaeological remains of significance within the proposed footprints;
- Identify and map any remains of archaeological significance within the proposed footprints; and
- Assess the sensitivity and significance of archaeological remains within the proposed footprints.

10.3. Methodology

Two site visits were undertaken; the first from 29 – 30 July 2005 and the second on 9 June 2005. The study entailed a baseline archaeological survey and assessment of each of the proposed footprints. This included the proposed access roads.

A desktop study was undertaken.

Dr Johan Binneman of the Department of Archaeology at the Albany Museum, Grahamstown was also consulted.

The criteria used to rank the proposed footprints and to establish the Footprint Preference Rating include the following:

- Archaeological sensitivity of the proposed footprint.
- Presence/absence of archaeological remains.
- State of preservation of archaeological remains.
- Range and density of archaeological remains.
- Type of footprint that occurs (e.g. cave, paintings, workshop, and quarry).
- Rarity of occurrence.
- Local, regional and national importance.

10.4. Site Assessment

The six proposed footprints, including proposed access roads were searched for archaeological remains.

10.4.1. Footprint A: Coega Kammas Kloof 191 Portion 5

The footprint is infested with alien vegetation resulting in low archaeological visibility (Figures 10.1 & 10.2). Some open spaces do however occur.

Early Stone Age[9] (ESA) and Middle Stone Age[10] (MSA) tools were found during a search of the footprint. Most of the tools were found in the proposed access road, or alongside the road on the grassy slopes. Only a few tools were located on the proposed footprint.

The tools include a range of cores, unmodified flakes, chunks, a hammerstone, a ground stone and split and flaked cobbles. All the tools were made on locally available quartzite cobbles (Figures 10.3 & 10.4).

The tools were located in a disturbed and degraded context and the finds are not considered to be significant.

[9] A term referring to the period between 2 million and 250 000 years ago.

[10] A term referring to the period between 250 000 and 20 000 years ago.

Figure 10.1: Archaeological study Regional Hazardous Waste Site: Footprint A Access Road

Figure 10.2: Archaeological study Regional Hazardous Waste Site: Footprint A

Figure 10.3: Archaeological study Regional Hazardous Waste Site: Footprint A collection of stone tools

Figure 10.4: Archaeological study Regional Hazardous Waste Site: Footprint A collection of stone tools

10.4.2. Footprint B: Blauw Baatjies Vley 189 Portion 2

Large, heavily overgrazed and degraded open spaces occur surrounded by indigenous vegetation (Figures 10.5).

A low-density scatter of MSA and a few Later Stone Age[11] (LSA) tools were located among nodules and chunks of calcrete in the large open areas. The tools include both modified and unmodified flakes, cores, chunks and an adze (Figure 10.6). The majority of tools are in quartzite, but two retouched tools in indurated shale were also found. The quartzite could easily have been obtained locally, but the source of the indurated shale is uncertain.

A few MSA flakes and chunks were noted in the proposed access road. The surrounding area is also heavily degraded, overgrazed and trampled.

All the tools were located in a disturbed context and the finds are not considered to be significant.

Figure 10.5: Archaeological study Regional Hazardous Waste Site: Footprint B

[11] A term referring to the last 20 000 years of precolonial history in southern Africa.

Figure 10.6: Archaeological study Regional Hazardous Waste Site: Footprint B collection of stone tools

10.4.3. Footprint C: Grassridge 190 Portion 3

The proposed footprint is infested with indigenous vegetation, resulting in low archaeological visibility (Figure 10.7). A few open spaces do occur, however.

A handful of MSA flakes in fine-grained quartzite were noted on the footprint and in the proposed access road (Figure 10.8). Two quartzite stone flakes were also found near an old borrow pit alongside the farm fence line. One snapped chalcedony flake was also found. The quartzite could easily have been obtained locally, but the source of the chalcedony is uncertain.

All the tools were located in a disturbed context and the archaeological finds are not considered to be significant.

Figure 10.7: Archaeological study Regional Hazardous Waste Site: Footprint C

Figure 10.8: Archaeological study Regional Hazardous Waste Site: Footprint C collection of stone tools

10.4.4. Footprint D: Blauw Baatjies Vley 189 Portion 3

The proposed footprint is well vegetated resulting in low archaeological visibility (Figures 10.9 and 10.10). Some open strips of land occur alongside the fence lines.

MSA tools were located mainly in the proposed access road. The tools comprise a number of medium sized cores, modified and unmodified flakes, a hammerstone, blade tools and chunks (Figures 10.11). A few flakes were located in trampled areas alongside the farm fence lines. The tools are made on fine grained, locally available quartzite.

All the tools were located in a disturbed context and the archaeological finds are not considered to be significant.

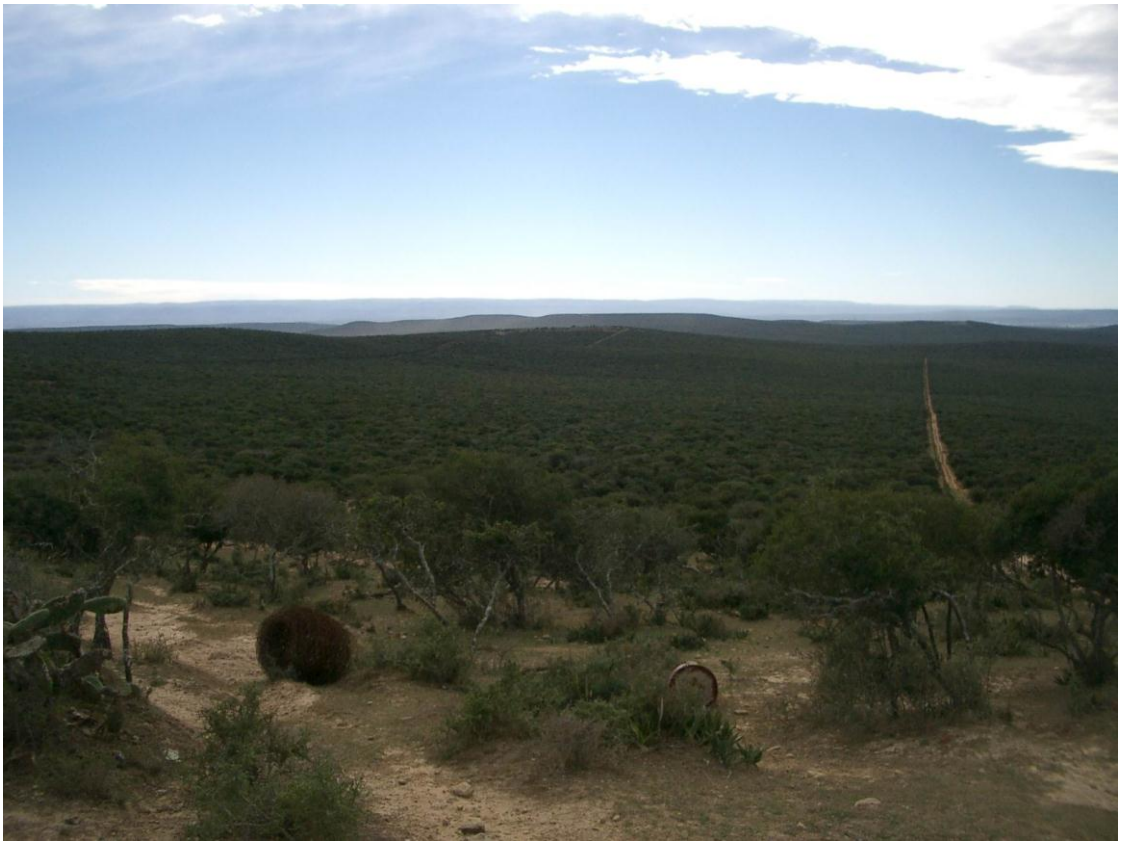

Figure 10.9: Archaeological study Regional Hazardous Waste Site: Overview of Footprint D and access road

Figure 10.10: Archaeological study Regional Hazardous Waste Site: Footprint D

Figure 10.11: Archaeological study Regional Hazardous Waste Site: Footprint D collection of stone tools.

10.4.5. Footprint E: Grassridge 227 Remainder

The proposed footprint has been heavily mined and is severely degraded (Figures 10.12 and 10.13).

Several LSA tools (including flakes, chunks and a core) in quartzite, silcrete and indurated shale were located during the assessment of the footprint, while two tools were also found in the gravel road alongside the fence line in the northern portion of the footprint (Figure 10.14).

The archaeological finds were located in a severely disturbed and degraded context and are not considered to be significant.

Figure 10.12: Footprint E: View facing south-east

Figure 10.13: Footprint E: View facing south-west

Figure 10.14: Footprint E: Collection of stone tools (scale is in cm)

10.4.6. Footprint F: Grassridge 190 Remainder

The proposed footprint is heavily overgrazed in places but parts are also infested with dense thicket vegetation. Some open spaces occur in places (Figures 10.15 and 10.16). Several footpaths and game tracks cut across the property.

A few MSA and LSA tools were found in the overgrazed and degraded open spaces, among nodules and chunks of calcrete. Several tools were also noted in a gravel road. The tools include unmodified flakes, chunks and several cores (Figure 10.17). No formal tools were noted. The tools are all in rough-grained quartzite.

The archaeological finds were located in a disturbed and degraded context and are not considered to be significant.

Figure 10.15: Footprint F: View facing north-east

Figure 10.16: Footprint F: View facing north-west

Figure 10.17: Footprint F: Collection of stone tools (scale is in cm)

10.5. Results

The ratings for the six proposed footprints are shown in Table 10.1.

Table 10.1: Ranking of the proposed hazardous waste footprints

Footprint	Score	Footprint Preference Rating
Footprint A: Regional Kammas Kloof 191	5	5 (Ideal)
Footprint B: Blauw Baatjies Vley 189 Portion 2	5	5 (Ideal)
Footprint C: Grassridge 190	5	5 (Ideal)
Footprint D: Blauw Baatjies Vley 189 Portion 3	5	5 (Ideal)
Footprint E: Grassridge 227 Remainder	5	5 (ideal)
Footprint F: Grassridge 190 Remainder	5	5 (ideal)

10.6. Conclusions

The study has shown that the proposed footprints for the development of a Regional Hazardous Waste Site are all suitable for development and no footprint is more preferred than another in terms of their potential archaeological impact.