

ARCHAEOLOGICAL STUDY
DUFERCO STEEL MILL PROJECT

Prepared for

DUFERCO STEEL PROCESSING

(pty) Ltd

By

Agency for Cultural Resource Management

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95

One archaeological site was located during a baseline study of the site for the proposed Dufenco steel processing plant near Saldanha Bay on the Cape west coast.

The site, comprising a small low density scatter of Middle Stone Age flakes, chunks and chips, was located on an unconsolidated calcrete surface in a disturbed context more or less in the centre of the proposed site, on a low ancient dune.

The significance of the archaeological site is low. As a result no mitigation is required.

No other archaeological sites or remains were located during a detailed foot survey of the affected area, which included an inspection of recent test excavations and associated spoil dumps.

The study site is well vegetated, but archaeological visibility is high.

The probability of locating above surface sites of archaeological importance during initial site preparation is considered to be low.

Vertebrate fossils and archaeological occurrences may, however, be uncovered during excavations from the underlying limestone (calcrete) and associated sediments. It is well established that such fossil and archaeological occurrences are valuable sources of information on the sedimentary, chronological, palaeoenvironmental and palaeoecological contexts of the development of human behaviour during the Middle Stone Age.

Excavations of any kind in establishing infrastructure in the limestone and other calcareous deposits on the proposed Dufenco site will potentially impact on Pleistocene archaeological remains.

Strategies aimed at sampling the fossils that might be encountered during this phase of the project will need to be developed and applied.

The following recommendations are made:

1. No immediate archaeological mitigation is required.

2. Staff training in recognising archaeological and fossil remains prior to the commencement of site preparation and construction activities is conducted.

Executive summary

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3. An archaeological monitoring programme is implemented during site preparation and construction activities. These include bulldozing, borrowing, drilling, grading, piling, excavation, digging trenches, and provision of services and infrastructure.

4. A personnel reward system for locating archaeological and fossil remains during site preparation and construction is supported.

1. Introduction

1.1 Background and brief

The Agency for Cultural Resource Management (ACRM) has been requested by Dufenco Steel Processing (Pty) Ltd to undertake a baseline archaeological survey of the proposed steel mini-mill site approximately five kilometers north-east of Saldanha Bay on the Cape west coast.

The aim of the archaeological study is to locate, identify and map archaeological sites that may be impacted by the planning, construction and implementation of the proposed project and to propose measures to mitigate against the impact.

2. Terms of reference

The terms of reference for the archaeological study were:

1. to determine whether there are likely to be any archaeological sites of significance on the site;
2. to identify and map any sites of archaeological significance;
3. to assess the status and significance of any impacts resulting from the proposed development; and
4. to identify mitigatory measures to protect and maintain any valuable archaeological sites that may exist.

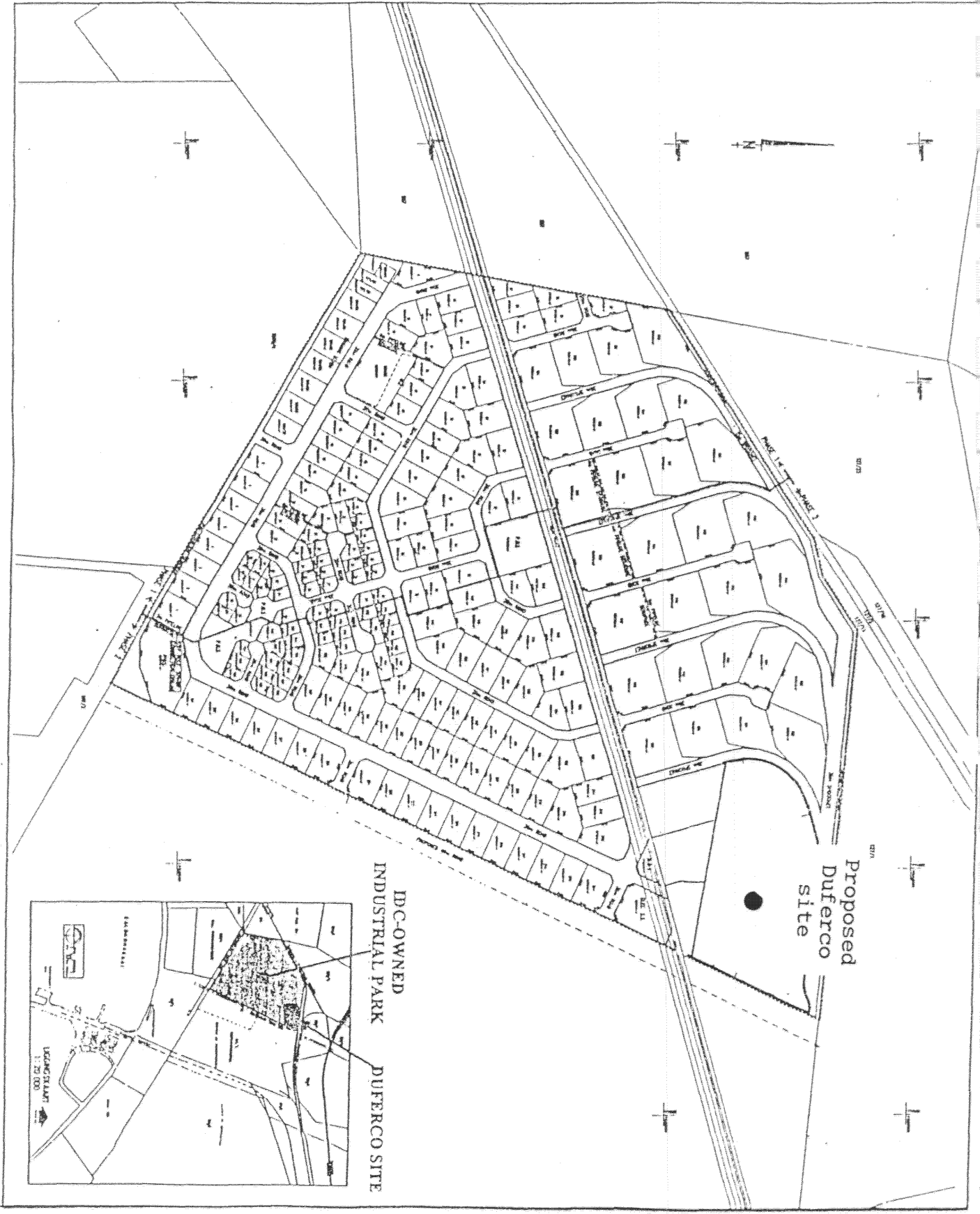
3. The study site

The study site for the proposed Dufenco steel mini-mill is illustrated in Figure 1.

The eight hectare site is located approximately five kilometers north-east of Saldanha Bay. The site is located to the immediate north-west of the proposed Alpha Saldanha cement plant, and about two kilometers east of the Saldanha steel project, falling within a larger zoned industrial park owned by the Industrial Development Corporation (IDC).

The vegetation in the study site is predominantly West Coast Strandveld.

Figure 1. Dufferco Steel Mill Project Archaeological Study: study site and location of archaeological site.



1. A term referring to the period between 200 000 and 20 000 years ago.
2. A term referring to the last 20 000 years of precolonial history in southern Africa.
3. A term referring to the period between 2 million and 200 000 years ago.

It is also well established that vertebrate fossils and archaeological occurrences in the Langebaan Limestone formation and associated calcareous deposits are extremely valuable sources of information on the sedimentary, chronological, palaeoenvironmental and palaeoecological contexts of the development of modern behaviour during the Middle Stone Age and perhaps even the Early Stone Age.

A surface collection of late nineteenth to early twentieth century glass, ceramics, bone, buttons and other artefacts from a shepherd's hut (veewagterhuis) was carried out on the SSP site. Test excavations also shed light on the early history of the Strandveld during this time (Kaplan 1996b).

Some archaeological remains were located during studies for the proposed Saldanha Steel Project (SSP) (Kaplan 1994, 1996a), the proposed Alpha Saldanha Cement Project (Kaplan 1997a), and the proposed Salamander Cove Project (Kaplan 1997b). These projects are all located within a two kilometer radius of the proposed Dufenco steel mill site. The material, however, included only isolated finds of a few Middle Stone Age (MSA) and Later Stone Age (LSA) implements in severely disturbed contexts. The archaeological significance of these finds was rated low to negligible, and no mitigation was required.

The archaeological significance of the Vredenburg/Saldanha Bay/Langebaan (VSL) area has been well established, however, where more than 400 sites have been recorded and mapped (Kaplan 1993:24-25).

In addition to the field study, an examination of the existing records in the South African Museum was also undertaken. According to the records of the Archaeological Data Recording Centre at the South African Museum, no sites have been recorded in the study area.

The approach followed in the baseline archaeological study entailed a detailed foot survey of the proposed site. An inspection of all recent test excavations and associated spoil dumps was also carried out.

4.1 Method of survey

4. Study approach and documentation of archaeological sites

101

Referring to the Alpha Saldanha Cement Project, Avery (1997:1) has argued that excavation of any kind in establishing infrastructure in the Langebaan Limestones and associated deposits will "potentially impact on Pleistocene archaeological remains".

According to Avery (1997), Middle Pleistocene archaeological occurrences and the recovery of human remains from hyaena lairs in the Langebaan Limestone at Saldanha Bay have provided some of the earliest evidence we have for human exploitation of coastal resources and will contribute significantly to evidence concerning the development of modern human behaviour (Volman 1978; Grine & Klein 1993; Berger & Parkinson 1995). Roberts (1997) has also demonstrated the significant palaeontological (fossil) importance of the VSL area.

Recent excavations by SSP generated fossil remains from the Miocene period about 5 million years ago from the underlying calcareous deposits on the site during excavations for dewatering pits.

4.2 Documentation of archaeological sites

The archaeological site located in the proposed Dufenco (Pty) Ltd site has been described according to accepted archaeological recording techniques. The site has been plotted on the 1:50 000 map (3317 BB & 3318 AA Saldanha). A photographic record of the record of the site has been made. In addition, a Global Positioning System (GPS) reading of the site has been taken.

5. Results of the impact assessment

One archaeological site was recorded in the baseline study (Figure 1).

DSP refers to Dufenco Steel Processing.

DSP 1. GPS reading S 32°58.55 E 17°59.63

The site comprises a low density scatter of MSA silcrete flakes, chunks, chips and a core, on a disturbed unconsolidated calcareous surface, more or less in the centre of the study site, on a low dune, and about 10 metres north from the vehicle track which cuts across the site.

Significance of finds: low

Suggested mitigation: none required

6. Impact statement
The impact of the proposed Dufenco Steel Processing plant on surface archaeological sites in the affected area is low to negligible.

7. Legislation

All archaeological and palaeontological sites are protected by the National Monuments Act (Act No. 28 of 1969 as amended). It is an offense to disturb, remove or destroy from its original site, or excavate any such site without a permit from the National Monuments Council. Prior to development of the proposed Dufenco Steel Processing site, a permit to destroy DSP 1 must be applied for by Dufenco (Pty) Ltd from the National Monuments Council.

8. Recommendations for archaeological management and mitigation

With regard to the proposed Dufenco Steel Processing project, the following recommendations are made:

1. No immediate archaeological mitigation is required.
2. Staff training in recognising archaeological and fossil remains prior to the commencement of any site preparation and construction activities is conducted.
3. An archaeological monitoring programme is implemented during site preparation and construction. These include bulldozing, borrowing, drilling, grading, piling, excavation, digging trenches, and provision of services and infrastructure.

4. A proposed personnel reward system for locating archaeological and fossil remains during site preparation and construction activities is also supported (Dufenco Steel Project Steel Rolling Mini-Mill: Environmental Management Plan 1997:20)

The above recommendations are subject to approval by the National Monuments Council Archaeological Plans Committee.

9. References

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