PORT DURNFORD PRE-FEASIBILITY STUDY: IDENTIFICATION OF SITES OF ARCHAEOLOGICAL AND CULTURAL SIGNIFICANCE

For: Exxaro (Pty) Ltd

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INTRODUCTION

Umlando was contracted by Exxaro (Pty) Ltd to undertake a desktop heritage assessment of potential heritage sites in the proposed Port Durnford Mining Lease. A 1:50 000 topographical map was provided wherein the affected area was outlined.

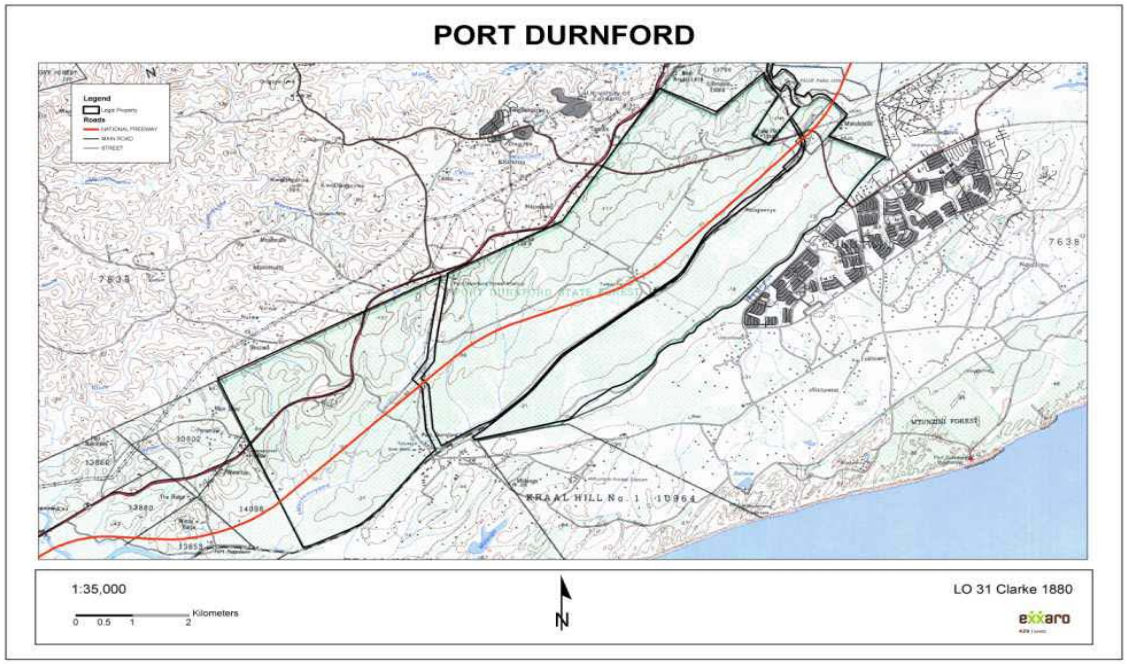
No known archaeological sites occur in the affected area, although two living heritage sites do occur. These two sites can also be referred to as historical sites. One site of possible industrial heritage significance occurs in the affected area: this is a group of blue gum trees that are apparently nearly 100 years old. There are no known, or listed, historical buildings in the affected area.

The affected area is collectively known as the Port Durnford State Forest. It consists of:

- Portion of Farm 16802 of Port Durnford State Forest (1195.26 ha),
- Portion of Farm 16832 of Port Durnford State Forest (1797.07 ha) and
- Portion of Farm 16833 of Port Durnford State Forest (920.27 ha)

This area is situated south of the Hillendale Mine, and is bordered by the R102 to the west and the coastal railway line to Durban to the east. eSikhaweni is located along the north-eastern border (Fig. 1).

Fig. 1: Locality map



The Scope of Work is as follows:

1) Phase 1: Desktop study
   a) Describe the occurrence and significance of any sites of recognised archaeological and/or cultural interest in the area of investigation.
   b) Assessment should include consultation with relevant parties and a desktop survey of available information.
   c) To note all sites as identified in (a) on a plan.
   d) Describe the significance of each site identified in (a), and issue recommended management plans for each site.
2) Phase 2: Field verification
   a) Verification of desktop study based on site visits.
   b) Update plan as compiled in 2.2.1 c), as necessary.
   c) Update Phase 2.2.1 d), as necessary.
   d) To describe the anticipated negative and positive impacts on the sites identified under (a) above during the construction phase, operational phase, decommissioning phase and after mine closure.

e) To describe how the negative impacts as described under item (b) above will be managed and how the positive impacts will be maximised.
f) To set out the management criteria pertaining to sites of archaeological and/or cultural interest that will be used during the life of the project so that the stated and agreed closure objectives can be achieved and a closure certificate issued.
g) Identify the required regulatory approvals for mining of the proposed area.

3) Specific attention should be given to the following:

a) Two clumps of *Eucalyptus* sp. trees which have been planted in early 1900's.
b) Graves on site
c) Verification of cultural significance of any buildings on site.

This report deals specifically with points 1 and point 3a. the rest will be covered during Phase 2.

METHOD

I have consulted the Natal Museum database for known archaeological sites in KwaZulu-Natal, as well as Umlando's own database[1]. In addition to these sources I have consulted with a local historian who provided me with historical maps of the affected area.

The historical maps are out of proportion, yet informative. Whilst the coastline is mostly accurate, the hinterland tends to be 'out of scale'. To counter this I have used 1:50 000 topographical and Google Earth maps to estimate where potential sites may occur.

[1] The two databases differ in that Umlando's database has additional information relating to living heritage, oral history and historical sites.

All sites are defined according to their relative significance and a management plan is suggested.

Defining significance

All sites are grouped according to low, medium and high significance for the purpose of this report. Sites of low significance have no diagnostic artefacts, especially pottery. Sites of medium significance have diagnostic artefacts and these are sampled. Sampling includes the collection of artefacts for future analysis. All diagnostic pottery, such as rims, lips and decorated sherds are sampled, while bone, stone and shell are mostly noted. Sampling usually occurs on most sites. Sites of high significance are excavated or extensively sampled. The sites that are extensively sampled have high research potential, yet poor preservation of features. I attempt to recover as many artefacts from these sites by means of systematic sampling, as opposed to sampling diagnostic artefacts only.

Significance is generally determined by several factors. However, in this survey, a wider definition of significance is adopted since the aim of the survey is to gather as much information as possible from every site. This strategy allows for an analysis of every site in some detail, without resorting to excavation.

Archaeological sites vary according to significance and several different criteria relate to each type of site. However, there are several criteria that allow for a general significance rating of archaeological sites.

These criteria are:

1. State of preservation of:
    1.1. Organic remains:
        1.1.1. Faunal
        1.1.2. Botanical

1.2. Rock art
1.3. Walling
1.4. Presence of a cultural deposit
1.5. Features:
    1.5.1. Ash Features
    1.5.2. Graves
    1.5.3. Middens
    1.5.4. Cattle byres
    1.5.5. Bedding and ash complexes

2. Spatial arrangements:
    2.1. Internal housing arrangements
    2.2. Intra-site settlement patterns
    2.3. Inter-site settlement patterns

3. Features of the site:
    3.1. Are there any unusual, unique or rare artefacts or images at the site?
    3.2. Is it a type site?
    3.3. Does the site have a very good example of a specific time period, feature, or artefact?
4. Research:
    4.1. Providing information on current research projects
    4.2. Salvaging information for potential future research projects
5. Inter- and intra-site variability
    5.1. Can this particular site yield information regarding intra-site variability, i.e. spatial relationships between various features and artefacts?
    5.2. Can this particular site yield information about a community's social relationships within itself, or between other communities.
6. Archaeological Experience:
    6.1. The personal experience and expertise of the CRM practitioner should not be ignored. Experience can indicate sites that have potentially significant aspects, but need to be tested prior to any conclusions.

7. Educational:
   7.1. Does the site have the potential to be used as an educational instrument?
   7.2. Does the site have the potential to become a tourist attraction?
   7.3. The educational value of a site can only be fully determined after initial test-pit excavations and/or full excavations.

The more a site can fulfill the above criteria, the more significant it becomes. Test-pit excavations are used to test the full potential of an archaeological deposit. These test-pit excavations may require further excavations if the site is of significance. Sites may also be mapped and/or have artefacts sampled as a form of mitigation. Sampling normally occurs when the artefacts may be good examples of their type, but are not in a primary archaeological context. Mapping records the spatial relationship between features and artefacts.

THE ENVIRONMENT

Most of the area is under afforestation and/or sugar cane, with some indigenous forest. My experience is that afforestation tends to damage archaeological sites, and results in a poor visibility of these types of sites. The vegetation and associated foliage covers the ground surface and thus also obscure potential sites. It is thus very difficult to record in tact archaeological sites in previously afforested areas.

RESULTS

Archaeological Sites

No known archaeological sites occur within the affected area. However, several sites have been recorded in close proximity to the study area[2] (Anderson

[2] I have recorded more sites in the general area, but this information is still confidential. The results of that report also indicated that there is a very high possibility of previous human occupation in the area.

1995; Anderson & Anderson 2004 - 2007). Various other archaeological sites have been recorded in the general area.

These recorded sites (outside of the affected area) consist of the following:

- Middle Stone Age stone tool scatters
- Late Stone Age stone tool scatters
- Early Iron Age settlements
- Late Iron Age settlements
- Early and Late Iron Age iron smelting sites
- Colonial historical sites, e.g. army encampments, forts (or redoubts), magisterial buildings, early mission stations, trading routes
- Living heritage sites

I assume that archaeological sites would occur in the affected area, regardless of their status of preservation. The problem finding these sites will result in their visibility. In these types of scenarios we suggest that there is regular on site monitoring during the course of mining itself.

Historical sites

There are no known historical sites in the effected area. However, there are a few historical sites, relating to the Anglo-Zulu War on the outskirts of the effected area. This includes Fort Argyle, Fort Napoleon, and related sites. Fort Richards is beyond the boundaries of the area. The important point is that the effected area is in the pathways of these Forts, and thus artefacts may occur. These would be isolated instances.

Similarly the Norwegian Mission Station is just outside of the effected area. One should consider that the mission itself had a far reaching impact on the local community. Unfortunately the historical maps only indicate the locations of the chief's huts, and not that of the lay person: both are equally important.

The effected area does impact on “original” historical walkways. These have been recorded by the early colonial cartographers (even though they are inaccurate for today’s standards).

There are no known buildings in the effected area that have been recorded in various databases.

The more important site is cluster of Blue Gum trees apparently dating to the 1920s. According to oral history these were part of the original trees planted in the area. I am still attempting to obtain further information regarding these trees. I will need to speak to the manager of the plantation to verify the age, etc of the trees. If these trees are as old as claimed to be, then they should be protected for various reasons. These include;

- Historical uniqueness, should be seen in relation with the Raphia Palms at Mtunzini
- As part of the history of the Port Durnford area: the trees themselves are symbolic of early industrialisation in the province.
- The potential to provide climatological information and paleaoenvironmental reconstruction in terms of dendrochronology.

Living Heritage Sites

According to our records there are two living heritage sites in the effected area. According to an oral history report there are two household sites of living heritage status in the effected area. These are :

- Ezintandaneni: Mciyashi Nyawo, and
- KwaKhohlokwenzileyo: Nonqgekeza Khanyile

Apparently these are homesteads of people who lived in the area some time ago. The exact locations of these sites are however dubious as the photographs do not match the location of the co-ordinates. These sites need to be confirmed and accurately recorded.

Management Plan and Further Mitigation

The desktop study has revealed that several archaeological and historical sites occur outside of the effected area. This suggests that there is a possibility of sites occurring inside of the affected area.

A Phase 2 will survey the area and record any sites. These will include photographic and GPS recordings, as well as ratings of significance and management plans.

REFERENCES

Anderson, G. 1995. Survey report for CSIR on the Hillendale mine.

Anderson, G. & Anderson, L. 2004 – 2007. Annual reports for Exxaro Hillendale surveys and excavations.