

**ANNUAL HERITAGE REPORT FOR FAIRBREEZE
MINE**

**FOR TRONOX KZN SANDS
DECEMBER 2022**

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ABBREVIATIONS

HP	Historical Period
IIA	Indeterminate Iron Age
LIA	Late Iron Age
EIA	Early Iron Age
ISA	Indeterminate Stone Age
ESA	Early Stone Age
MSA	Middle Stone Age
LSA	Late Stone Age
HIA	Heritage Impact Assessment
PIA	Palaeontological Impact Assessment

GENERAL AGE GROUPS DATE

Period	Pottery Group	Associated language/people	Years ago
ESA	N/A	Foragers/hunter/gatherers	1.5 million - 250 000
MSA	N/A	Hunter gatherers	250 000 – 30 000
LSA	N/A	San Hunter gatherers	30 000 – 2 000
EIA	1	Mzonjani	1 700 – 1 500
EIA	2	Msuluzi	1500 - 1300
EIA...	3	Ndondondwane	1300 – 1100
EIA	4	Ntshekane	1100 - 900
LIA	5	Blackburn/Mpambanyoni	900- 700
LIA	6	Moor Park	700 - 500
LIA	7	Thembi-Tsonga/Zulu along the eastern seaboard	500 – 250/300
Historical	Groups 8,9	Zulu-speaking people	300 – present

ESA = Early Stone Age

MSA = Middle Stone Age

LSA = Late Stone Age

EIA = Early Iron Age

LIA = Late Iron Age

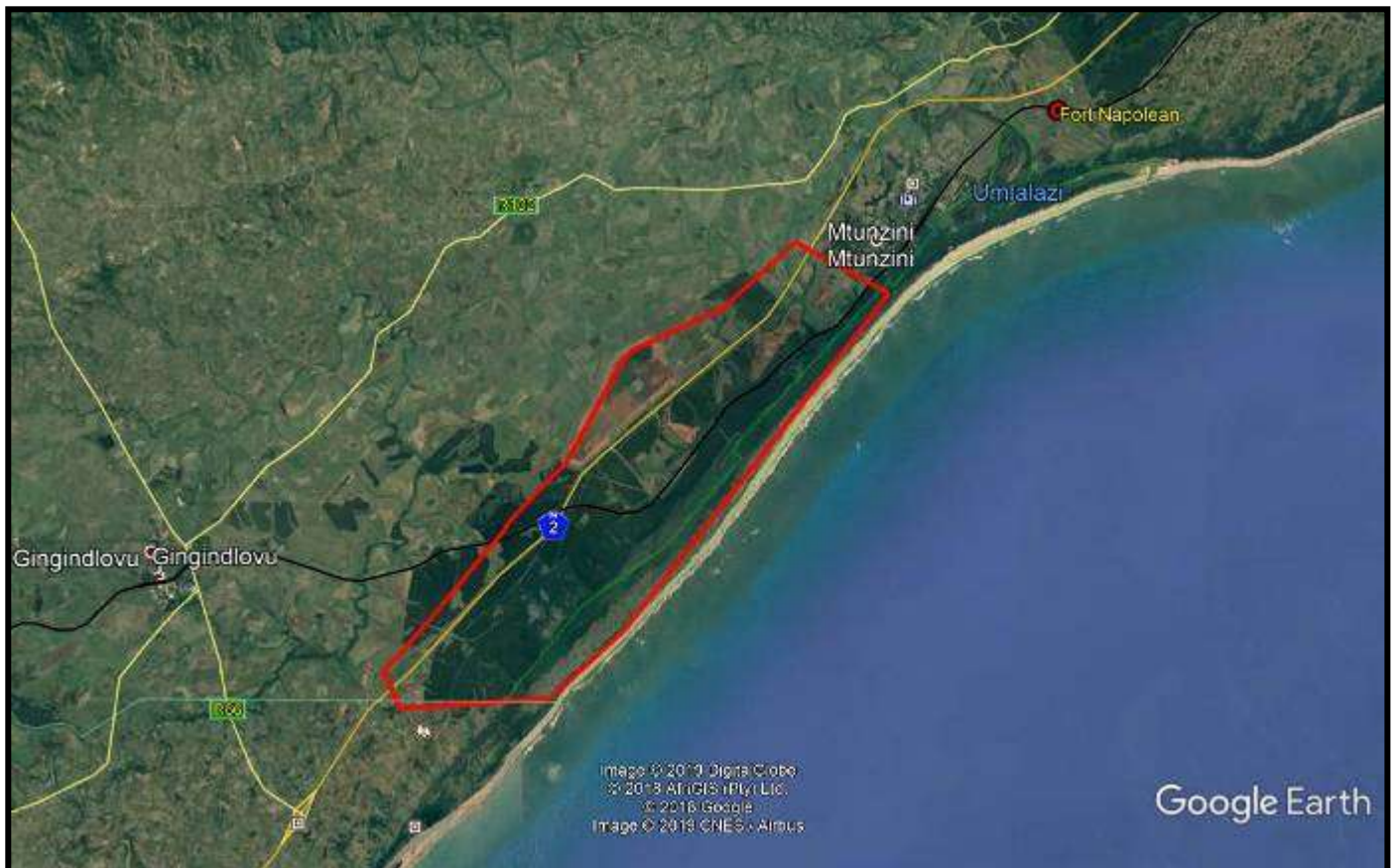
INTRODUCTION

Umlando was appointed by Tronox KZN Sands (Pty) Ltd to undertake the heritage management of the Fairbreeze mine during the operational phase. The mine is located south of Mtunzini and occurs in land previously used for sugar cane farming and afforestation (fig. 1).

Part of the EMPR is that monthly surveys of the mine are undertaken regardless of progress of the mine. The surveys cover areas that have been recently exposed for mining activity. Any other issues that require heritage comments are dealt with on an *ad hoc* basis, e.g. the human skeletal excavations at TRON04 in 2020.

The permit from Amafa KZN to undertake the destruction of archaeological sites was renewed in November 2020 on SAHRIS and approved on 4 February 2021. It is valid until February 2024 (Appendix A).

FIG. 1: LOCATION OF THE FAIRBREEZE MINE



METHOD

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 occurs on most sites. Sites of high significance are excavated and/or extensively sampled. Those sites that are extensively sampled have high research potential, yet poor preservation of features. We attempt to recover as many artefacts from these sites by means of systematic sampling, as opposed to sampling diagnostic artefacts only.

Defining significance

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?

3.2.1. 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 fulfil 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.

SURVEY RESULTS

The main focus of the surveys was at Pump Station 6, while a few surveys were undertaken at Ore Body B. Fig. 2 shows the locations of the sites recorded so far.

FIG. 2: LOCATION OF MAIN SURVEYS



TRON05

TRON05 was revisited as part of the continual monitoring program at this site until it is mined. There was a possibility that human remains associated with the more recent layers at the site may occur. In 2021 several late 19th century to early 20th century artefacts were observed. During the January survey a shard with a 'Willow pattern' transfer print was recorded (fig. 3). Unfortunately, the painted fragment is not clear and cannot be dated. This part of TRON05 does however link to the Historical Period site at TRON04.

TRON05 was a multicomponent site, especially for the last 500 years. In 2021, some possible Thembu-Tsonga pottery (c 1500ACE – 1790ACE) was noted. During the 2022 surveys, more shards with the characteristic shell-impressed design, were observed at TRON05 (fig. 4). The sherd has oblique incisions on the internal and

external sides of the everted lip. There is a single row of shell-impressed decorations on the neck. This decoration is similar to those at RBM Zulti-North mining lease that have been recorded and excavated by Umlando (Anderson 1996 – 2004; Anderson and Anderson 2004 – 2022). This is important as it is the most southern expression of Thembi-Tsonga pottery in KZN. It was previously only recorded in the Zulti North mining lease, i.e. from Mereensee/Mzingazi northwards. A few individual pottery sherds could mean a single female marrying into the community, while more sites would imply a cultural occupation.

FIG. 3: TRANSFER PRINT AT TRON05

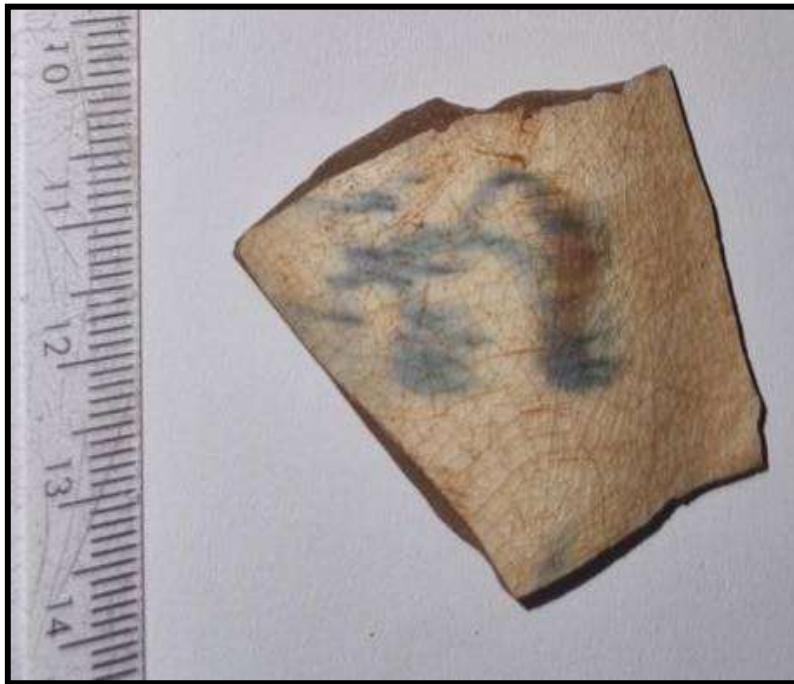


FIG. 4: SHELL IMPRESSED DECORATED POTTERY



Other artefacts include:

- Two glass fragments
- Beer bottle base (post-dating 1910)
- Three large pieces of iron slag/bloom.
- A fragment of a lower grinding stone
- A piece of iron oxide, or ochre
- Fragment of a *Cannabis spp* smoking pipe
- ESA stone tools
- MSA stone tools
- LSA stone tools

The glass is produced by an “Automatic Bottle Machine” from 1892 onwards. The ‘13’ on the base of one fragment refers to the mold number. Both pieces are from the same ‘vase’ and are referred to as (generic) Kitchenware. The post 1892 date fits in with the other recent historical artefacts at this site and at (excavated) TRON04. The vase would have looked similar to the ones in Fig. 5, but in clear glass.

The iron slag/bloom is large. It contains some bubbles within the main piece and impurities at the one side. The other side has molten sand. No other evidence for metalworking was noted at the site and this could mean that the bloom was brought to the site for further smelting.

The lower grinding stone is probably for maize; however, it could also be for sorghum. The stone used is dolerite.

I used the metal detector during the survey and recovered a fragment of an iron pot (fig. 6). This will be related to the late 19th – early 20th century occupation at the site.

Fig. 7 - 9 show some of these artefacts

FIG. 5: EXAMPLE OF GLASS KITCHENWARE



FIG. 6: CAST IRON POT FRAGMENT



FIG. 7: ARTEFACTS FROM TRON05



FIG. 8: ARTEFACTS FROM TRONO5



FIG. 9: ARTEFACTS FROM TRONO5



TRON06

TRON06 was surveyed as Tronox Sands is preparing Ore Body B. The current survey noted that TRON06 does not extend far and the site is probably an individual household. It will be monitored during the course of the year.

I surveyed some of the new tracks in this area up to the CM08 grave to assess the general potential of the area. Isolated stone tools and pottery shards were noted along the various tracks. This suggests that there are archaeological sites and these will require monitoring as per the EMPr.

A Middle Stone Age flake and an upper grinding stone were noted alongside the eastern road (fig. 10).

TRON07

TRON07 occurs approximately 70m north of TRON06. The site dates to the Late Iron Age or Historical Period and extends northwards. It is currently of low significance but was monitored for potential human remains

The site consists of a concentration of pottery shards and upper grinding stones that have been recently exposed. A fragment of a clay smoking pipe (for dagga?). This survey noted fragments of a Blackburn shard, an “*ukhamba*” (Zulu beer pot), and general pottery shards. The Blackburn shard dates to c. 1100 ACE.

20th Century artefacts included a Coronation brick, bottle and a coin (fig. 12). The coin is a bronze 1936, 1 Penny, George V. The coin is probably a Chance Find and not related to TRON07. The base of the bottle has the (broken label of: “Property of Snell”. This is a 1930s soda water bottle.

Figures 11 – 13 show these artefacts.

FIG. 10: STONE TOOLS AT ORE BODY B



FIG. 11: ARTEFACTS AT TRON07

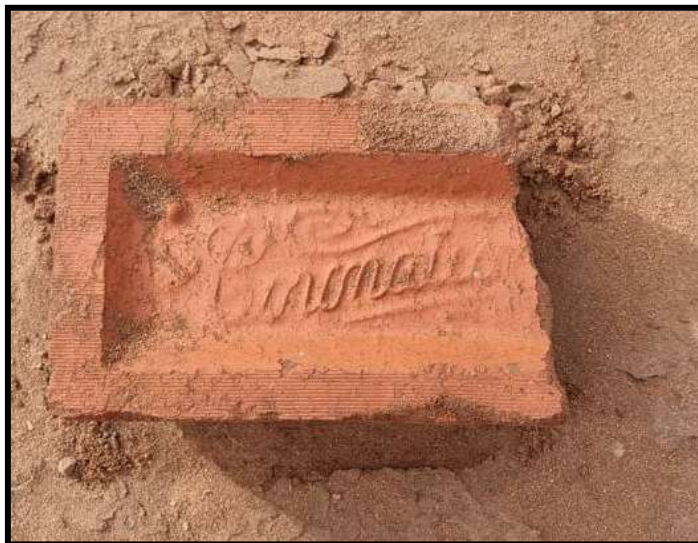


FIG. 12: ARTEFACTS AT TRON07



FIG. 13: STONE TOOL AND BLACKBURN POTTERY



CM8

CM08 is the area of the old farm labourer's houses and a grave. The grave was rechecked to ensure it was still *intact*. The grave has not been affected by any mining activity; however, natural deterioration has begun. For example, two of the retaining walls have fallen over and one of the arms on the cross is beginning to crack (fig. 14). I suggest these be managed and restored. There is a date on the grave: 25 – 6-1978.

The grave at CM8 has been given a 50m buffer. This has been clearly demarcated and fenced off. The on-site discussions allowed the 50m buffer to be reduced by 2m – 3m in some areas to allow for roads and pipelines (fig. 15).

CONCLUSION

The surveys at the Fairbreeze mine for 2022 yielded one new site while two others were monitored since 2021. The sites were small multicomponent sites mostly dating to the Historical Period. Blackburn (c 1100 -1300 ACE) and Thembi-Tsonga (c. 1500 – 1800 ACE) shards were also noted. The Thembi-Tsonga pottery was previously recorded only as far south as Richards Bay.

The current Ore Body C is near completion. Initial surveys at the new Ore Body B indicate that artefacts occur on the surface, and thus so will archaeological sites.

The issue of known and possible human graves in the mining lease was raised again 2022. Tronox Sands (Pty) Ltd needs to make formal agreements with the relevant community structures regarding ancestral remains in the mining area. This can then become the template for all future human remains that could be exposed by mining activity. It will also set out specific protocols on how community access to the grave is handled and who can access the grave. This will minimise ad hoc claims from individual members of the community. One cannot excavate ancestral graves without the community's consent. Any other graves in the Fairbreeze mining lease may result in the area being demarcated as a no-mining area until formal agreements have been reached.

FIG. 14: GRAVE AT CM8



FIG. 15: FENCING AT CM08



REFERENCES

Anderson, G. 1996 – 2004. Archaeological surveys and excavations in the Zulti North Mining Lease.

Anderson, G. And Anderson, L. 2005 - 2021. Archaeological surveys and excavations in the Zulti North Mining Lease.

Davies, O. 1971. *Excavations at Blackburn. South African Archaeological Bulletin* 26: 164-178.

APPENDIX A
PERMIT

Permits

Tronox Fairbreeze Mine Permit Renewal 2020

CaseNo: Tronox Fairbreeze Mine Permit Renewal 2020**PermitID:** 3200**PermitHolder:** Gavin Anderson**PermitDate:** Thursday, February 4, 2021 to Sunday, February 4, 2024**SiteReference:** Fairbreeze Mine**Conditions:**

Approval is hereby given to Tronox Sands in accordance with the application received , for renewal of permit 0006/03 extended in 2017 for the destruction of archaeological sites during mining at Tronox Fairbreeze Mine under the supervision of Mr Gavin Anderson of Umlando: Archaeological Surveys & Heritage Management, PO Box 102532, Meerensee, South Africa, 3901

Conditions: This permit is issued subject to the following conditions:-

- 1.1 That the permit is issued strictly for the purpose/s as set out in the application;
 - 1.2 That in the event of any contemplated deviation the prior **written approval** of KwaZulu Natal Amafa and Research Institute must be obtained;
 - 1.3 In such event, a **written motivation** in support of such deviation must be submitted to KwaZulu Natal Amafa and Research Institute for consideration and;
 - 1.4 No deviation will be permitted without the **prior written approval** of KwaZulu Natal Amafa and Research Institute.
 - 1.5 Where applicable, KwaZulu Natal Amafa and Research Institute shall have the right to inspect the site at any time;
 - 1.6 Monthly reports are to be submitted to KwaZulu Natal Amafa and Research Institute on the work being conducted and the findings;
 - 1.7 Monthly reports are to be accompanied by the relevant National Site Record forms;
 - 1.8 A final report on the work conducted and the findings must be submitted to KwaZulu Natal Amafa and Research Institute not later than thirty three (33) days from the date of expiration of this permit, extensions are negotiable;
 - 1.9 Copies of any papers compiled or published as a result of the work conducted or the findings made must be provided to KwaZulu Natal Amafa and Research Institute;
 - 1.10 KwaZulu Natal Amafa and Research Institute shall not be liable for any loss, damage or injuries to any person/s or property caused by any of the activities conducted by the Applicant;
 - 1.11 Where artefacts located at the site are, in terms of this permit, exported for research or other purposes, same must be returned immediately upon completion of the research or other activity to KwaZulu Natal Amafa and Research Institute.
 - 1.12 All archaeological and paleontological Material become, on discovery, the property of the Province of KwaZulu Natal and must be lodged at the repository of KwaZulu Natal Amafa and Research Institute.
 - 1.13 It is the responsibility of the Applicant to ensure that artefacts are preserved in its original state while in his/her possession;
 - 1.14 The Applicant shall be liable for any damage or destruction caused at any site or to any artefact.
 - 1.15 **FAILURE TO COMPLY WITH THESE CONDITIONS WILL RENDER ANY ACTIVITY CONDUCTED UNLAWFUL, AND KWAZULU NATAL AMAFA AND RESEARCH INSTITUTE RESERVES THE RIGHT TO CANCEL THIS PERMIT AND TO INSTITUTE CRIMINAL AND/OR CIVIL ACTION AGAINST THE PERSON/S RESPONSIBLE.**
- The issuing of this permit does not exempt the Applicant from compliance with any other law, where applicable

PermitFeePaidDate: 04/02/2021