



Archaetnos Culture & Cultural
Resource Consultants
BK 98 09854/23

**A REPORT ON A HERITAGE IMPACT ASSESSMENT (HIA) FOR
THE PROPOSED IKWEZI DOORNKOP MINE DEVELOPMENT
ON VARIOUS FARMS IN THE DANNHAUSER LOCAL MUNICIPALITY,
AMAJUBA DISTRICT MUNICIPALITY, KWAZULU NATAL**

For:

***IKWEZI MINING
PRIVATE BAG X11
BIRNAM PARK
2015***

REPORT: AE1128

by:

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In this case Amafa, the Heritage Authority in Kwazulu Natal needs to comment

SUMMARY

Archaetnos cc was appointed by Ikwezi Mining cc to conduct a Heritage Impact Assessment for their proposed Ikwezi Doornkop Mining development on various farms located between Newcastle and Dannhauser in the Dannhauser Local Municipality (Amajuba District Municipality) of Kwazulu Natal.

A number of cultural heritage (archaeological and historical) sites, features and objects of significance were identified during the assessment. The sites and finds date to the Stone Age, Iron Age and more recent historical time periods. Last mentioned includes grave sites. The report gives a discussion of these finds and observations made during the fieldwork and also gives an indication of the methodology followed. It also indicates how to deal with any archaeological material that may be unearthed or disturbed during the development activities.

Mitigation measures to minimize the impact of the development on the sites that were located during the assessment are put forward at the end of this report. Once these have been implemented the development, from a Cultural Heritage perspective, can continue.

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1. INTRODUCTION

Archaeos cc was appointed by Ikwezi Mining cc to conduct a Heritage Impact Assessment for their proposed Ikwezi Doornkop Coal Mining development on various farms located between Newcastle and Dannhauser in the Dannhauser Local Municipality (Amajuba District Municipality) of Kwazulu Natal.

The specialists were accompanied to the area by a representative of Ikwezi Mining (Mr. Raymond Zulu) who indicated the boundaries of the area to be surveyed, as well as the location of the areas of main concern (the opencast pits). The work was confined to this area.

2. TERMS OF REFERENCE

The Terms of Reference for the survey were to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located in the area of the proposed development (see **Appendix A**).
2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value (see **Appendix B**).
3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions.
4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources, should this be applicable.
5. Review applicable legislative requirements.

3. CONDITIONS & ASSUMPTIONS

The following conditions and assumptions have a direct bearing on the survey and the resulting report:

1. Cultural Resources are all non-physical and physical man-made occurrences, as well as natural occurrences associated with human activity. These include all sites, structure and artifacts of importance, either individually or in groups, in the history, architecture and archaeology of human (cultural) development. Graves and cemeteries are included in this.
2. The significance of the sites, structures and artifacts is determined by means of their historical, social, aesthetic, technological and scientific value in relation to their uniqueness, condition of preservation and research potential. The various aspects are not mutually exclusive, and the evaluation of any site is done with reference to any number of these aspects.
3. Cultural significance is site-specific and relates to the content and context of the site. Sites regarded as having low cultural significance have already been recorded in full and require no further mitigation. Sites with medium cultural significance may or

may not require mitigation depending on other factors such as the significance of impact on the site. Sites with a high cultural significance require further mitigation (see **Appendix B**).

4. The latitude and longitude of any archaeological or historical site or feature, is to be treated as sensitive information by the developer and should not be disclosed to members of the public.
5. All recommendations are made with full cognizance of the relevant legislation.
6. It has to be mentioned that it is almost impossible to locate all the cultural resources in a given area, as it will be very time consuming. Developers should however note that the report should make it clear how to handle any other finds that might be found.

4. LEGISLATIVE REQUIREMENTS

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

4.1 The National Heritage Resources Act

According to the above-mentioned act the following is protected as cultural heritage resources:

- a. **Archaeological artifacts, structures and sites older than 100 years**
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
- c. Objects of decorative and visual arts
- d. Military objects, structures and sites older than 75 years
- e. Historical objects, structures and sites older than 60 years
- f. Proclaimed heritage sites
- g. **Grave yards and graves older than 60 years**
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

The national estate (see **Appendix D**) includes the following:

- a. Places, buildings, structures and equipment of cultural significance
- b. Places to which oral traditions are attached or which are associated with living heritage
- c. Historical settlements and townscapes
- d. Landscapes and features of cultural significance
- e. Geological sites of scientific or cultural importance
- f. **Sites of Archaeological and palaeontological importance**
- g. **Graves and burial grounds**
- h. **Sites of significance relating to the history of slavery**
- i. **Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)**

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length
- c. **Any development or other activity that will change the character of a site and exceed 5 000m² or involve three or more existing erven or subdivisions thereof**
- d. Re-zoning of a site exceeding 10 000 m²
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

Archaeology, palaeontology and meteorites

Section 35(4) of this act deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial):

- a. **destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;**
- b. **destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;**
- c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.

Human remains

Graves and burial grounds are divided into the following:

- a. ancestral graves
- b. royal graves and graves of traditional leaders
- c. graves of victims of conflict
- d. graves designated by the Minister
- e. historical graves and cemeteries
- f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

- a. destroy, damage, alter, exhume or remove from its original position of otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act (Act 65 of 1983 as amended)**.

Unidentified/unknown graves are also handled as older than 60 until proven otherwise.

4.2 The National Environmental Management Act

This act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The

impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.

5. METHODOLOGY

5.1 Survey of literature

A survey of literature was undertaken in order to obtain background information regarding the archaeology of the area. Sources consulted in this regard are indicated in the bibliography.

5.2 Field survey

The survey was conducted according to generally accepted HIA/AIA practices and was aimed at locating all possible objects, sites and features of cultural (archaeological and historical) significance in the area of proposed development. If required, the location/position of any site is determined by means of a Global Positioning System (GPS), while photographs are also taken where needed.

The survey was undertaken on foot, although large portions were travelled by vehicle as visibility was fairly good. Areas with high potential for the presence of sites, features or objects of archaeological and historical (cultural) nature, such as erosion dongas, clumps of trees and hills/outcrops were focused on during the survey.

5.3 Oral histories

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography. **In this case no oral histories were recorded or interviews undertaken, although local residents were asked for their knowledge on the location of graves and grave sites.**

5.4 Documentation

All sites, objects, features and structures identified are documented according to the general minimum standards accepted by the archaeological profession. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

6. DESCRIPTION OF THE AREA

The project area is located in the Dannhauser Local Municipality, which forms part of the Amajuba District Municipality of Kwazulu Natal, between Newcastle and Dannhauser. The study area included a number of farms, namely Rooipoort 10745 HT, Alleen 2 4280 HT,

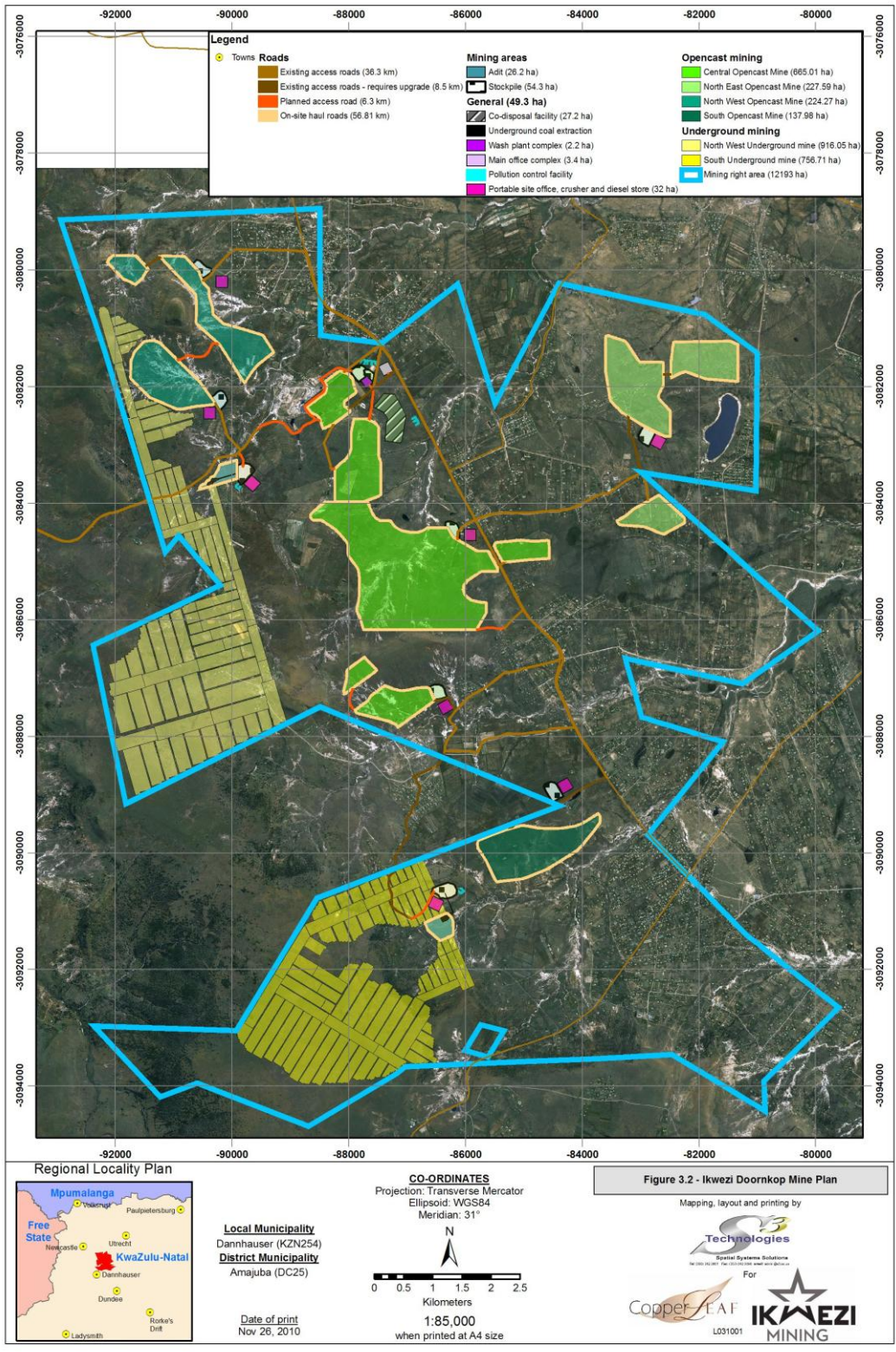


Figure 2: Location of area, showing positions of opencast pits and other infrastructure.

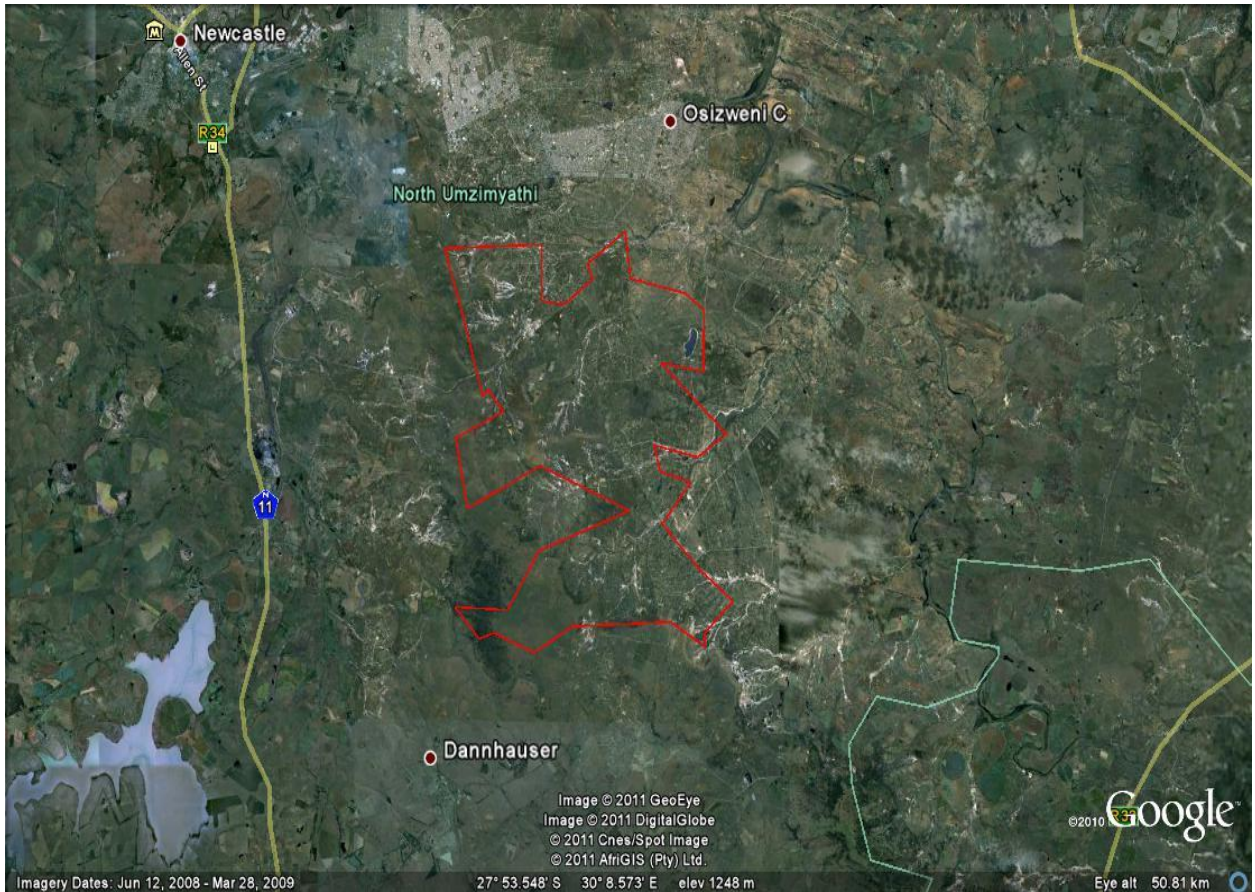


Figure 3: Aerial view of area location, with project boundary indicated. Provided by Ikwezi Mining (Google Earth 2008).

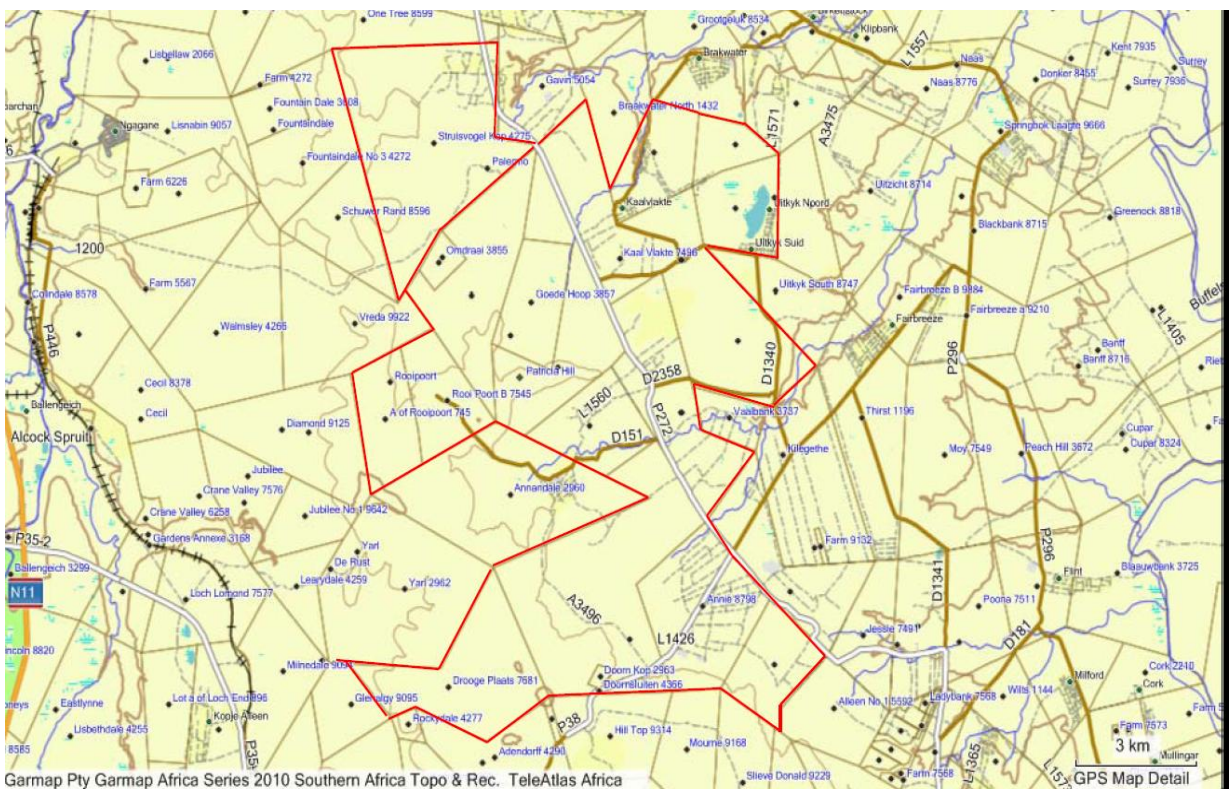


Figure 4: Topographic Location of area (Map Source 2010).



Figure 5: A typical view of the area.



Figure 6: Another view. Note the rolling hills, erosion donga/drainage line, grass and landscape denuded of trees.



Figure 7: Another view of the area.



Figure 8: A typical rural settlement found throughout the area.



Figure 9: A closer view of one of the many erosion dongas/ drainage lines criss-crossing through the area.

7. DISCUSSION

During the assessment a number of sites, features and objects of archaeological/recent nature were located in the area. In order to enable the reader to understand archaeological objects, features and sites that could possibly be unearthed and disturbed during development, it is necessary to give a basic background regarding the different phases of human history.

7.1 Stone Age

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools (Coertze & Coertze 1996: 293). In South Africa the Stone Age can be divided in three periods. **It is however important to note that dates are relative and only provide a broad framework for interpretation.** The division for the Stone Age according to Korsman & Meyer (1999: 93-94) is as follows:

- Early Stone Age (ESA) 2 million – 150 000 years ago
- Middle Stone Age (MSA) 150 000 – 30 000 years ago
- Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

Many of the sites or objects identified during the assessment date to the Stone Age.

7.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce artifacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases according to Van der Ryst & Meyer (1999: 96-98), namely:

- Early Iron Age (EIA) 200 – 1000 A.D.
- Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

- Early Iron Age (EIA) 250 – 900 A.D.
- Middle Iron Age (MIA) 900 – 1300 A.D.
- Late Iron Age (LIA) 1300 – 1840 A.D.

A number of Iron Age archaeological sites were recorded in the area.

7.3 Historical Age

The historical age started with the first recorded oral histories in the area. It includes the moving into the area of people that were able to read and write.

The oldest map found for this area (related to the surveying of farms) is that of the farm Goedehoop 3857 HT, dating to September 1872. Many of the farms, such as Struisvogel Kop, Diepsluiten and Alleen was surveyed and registered between in October and November 1875. This does indicate that European farmers were active in the area by this time.

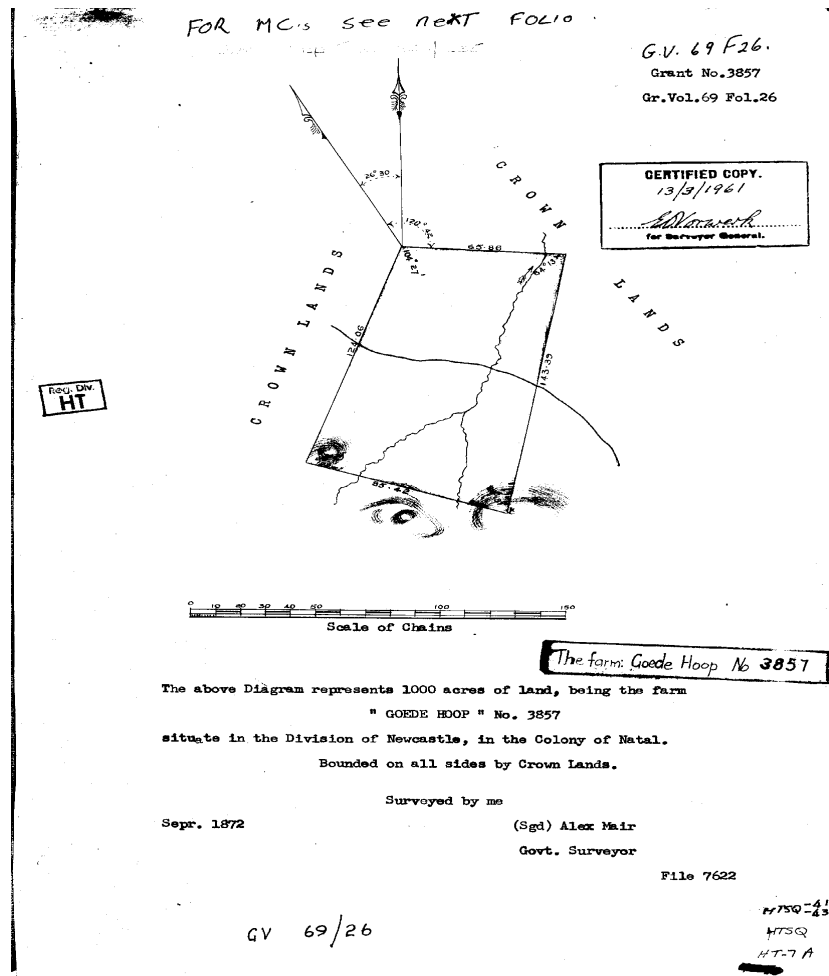


Figure 10: Map of Goedehoop 3857, surveyed in September 1872
Map courtesy Chief Surveyor General.

During the First War Of Independence (1880-1881) between the South African Republic (Zuid Afrikaansche Republiek or ZAR) and the British, the area also saw some action, with a few of the main battles of the war fought in Kwazulu Natal. The Battle of Schuinshoogte was fought on the 8th of February 1881 (**Duxbury 1980: 72-74**). The site where this battle was fought is situated around 30km northwest of the assessment area.

Archaeological evidence from KwaZulu-Natal shows that, similar to elsewhere in southern Africa, the region was occupied exclusively by Stone Age hunter-gatherers until the early centuries of the first millennium AD. The Later Stone Age (LSA) is associated with Khoesan people. In KwaZulu-Natal the earliest evidence of agriculturist communities appears in the early centuries of the first millennium AD. Calibrated dates of c. 400 AD identify Mzonjani as the earliest known farming settlement in KwaZulu-Natal.

Although evidence from the first phase of the Iron Age in KwaZulu-Natal is still relatively sparse, it is already apparent from southern Africa in general that the significant aspects of what has been called the Early Iron Age ‘package’ - including crop cultivation, livestock herding, iron production, settled village life and distinctive styles of ceramics - were already established. In KwaZulu-Natal the first, or Mzonjani, phase appears to be restricted to coastal areas, extending from the Mozambique border to the area south of Durban. People chose living sites in positions favourable for a range of economic activities, including slash-and-burn agriculture, small stock herding and iron smelting, while shellfish collecting seems to have contributed a significant part of the diet.

In the second half of the first millennium AD, Iron Age settlement extended further south along the coast, as well as inland up the valleys of major rivers such as the Thukela system, reaching altitudes of around 1000 m but remaining in wooded, savanna environments. The first interactions between hunter-gatherers and agriculturists in Kwazulu Natal took place in coastal or near-coastal settings, but became more widespread during the later part of the first millennium AD. On Iron Age settlements many shell disc beads, a large proportion of ostrich-egg shell, which must have been introduced from grassland regions, well inland of the area settled by Iron Age people at that time, have been found. Later Stone Age-style bone arrow-points and link-shafts, and on some sites, LSA stone artefacts, have also been found, possible evidence for hunter-gatherer presence at some of these sites. Likewise, in LSA deposits in rock shelters, pottery fragments of typical Early Iron Age style occur, sometimes far inland of Early Iron Age settlement.

Early in the second millennium AD, Late Iron Age settlement had extended into some grasslands of the KwaZulu-Natal interior. Some of these sites are in naturally defensible positions and have surrounding walls, while the associated material culture no longer includes LSA elements. This may reflect a period of greater competition or conflict. Later in the second millennium, Iron Age settlements become quite dense in these lower-altitude grassland areas, yet even with the arrival of white colonists in the nineteenth century, Khoesan groups still living a hunter-gatherer lifestyle survived in the interior at higher altitude, where the environment was unfavourable for Iron Age farming

During the second millennium AD we begin to see archaeological evidence for the material culture associated with ethnic/linguistic groups known today as Nguni-speaking people in KwaZulu-Natal. These patterns can be traced back to the beginning of the second millennium

AD. The evidence becomes compelling in the second half of the millennium when ceramics, settlement pattern and historical sources confirm continuity into recent times.

The above section comes from Ribot et al 2010:90-91.

Discussion of sites, features or objects found during the assessment

The sites, features and objects identified and recorded during the assessment dates to between the Stone Age, Iron Age and more recent historical period. A number of graves were also identified. It should be note that the total area was not surveyed and that only those areas that will be directly impacted by opencast mining pits and infrastructure development such as entrance and haul roads, site offices and stockpiles were focused on. During the assessment we concentrated on areas with the highest potential for finding archaeological and historical remains, such as erosion dongas, unnatural clumps of trees, hills and rocky outcrops. Although a number of graves and grave sites were found in the area, there could be many more scattered around, as indeed many local inhabitants indicated.

A number of the Stone Age sites also contained evidence of later Iron Age presence in the area, specifically containing scatters of undecorated pottery fragments.

A total of 27 sites were recorded in the area.



Figure 11: Site distribution (Google Earth 2011).

Stone Age

All the Stone Age finds and sites (mostly scatters of stone tools, flakes and cores and some larger concentrations of stone age material) were found in erosion dongas and drainage lines in the area. Although it was not possible to investigate all erosion dongas and drainage lines, it is believed that evidence for Stone Age hunter-gatherer presence in the area would be found in all these areas that basically criss-cross the study area.

The stone tools found in the area date mainly to the Middle Stone Age (MSA), and include blades, points, scrapers and other flake-tools. Cores were also found and on some sites cores, flakes and formal tools on the same material were recorded together. This could indicate possible manufacturing sites. A number of possible earlier Stone Age tools were also identified on some sites, including large bifacial hand axes.

The following sites date to the Stone Age (**refer to Figure 11 Site Distribution**):

DK2 – S27.91328 E30.14147
DK5 – S27.90649 E30.10771
DK7 – S27.87365 E30.12093
DK8 – S27.87342 E30.12065
DK9 – S27.87308 E30.12009
DK11 – S27.87642 E30.11890
DK12 – S27.87614 E30.11824
DK14 – S27.88480 E30.11963
DK15 – S27.88563 E30.11976
DK16 – S27.88599 E30.11991
DK24 – S27.85350 E30.08652

Of these only DK5 (which falls just outside the project area) and DK24 will not be impacted by the opencast pits. In terms of the other sites, DK2 is not significant (artifact density low) and no mitigation measures are necessary. DK7 – 11 and DK14-16 contains large numbers of tools and flakes, and is located in close proximity to each other and falls within one of the opencast pits. **Mitigation measures will therefore have to be implemented before the development can continue. These measures will be put forward at the end of the report.**



Figure 12: Stone tools from DK2.



Figure 13: Stone tools and pottery from DK7.



Figure 14: Broken point from DK9.



Figure 15: Large bifacial hand axe from DK9.

Iron Age

The Iron Age sites and finds recorded during the assessment consist of stonewalled features such as livestock enclosures, possible granary platforms and other stone packed features, as well as scatters of undecorated potsherds (representing most of the sites and finds). The exact

age of the Iron Age sites and material is at this stage not known, but it probably dates to the later Iron Age and around the late 17th to early 19th century. The following sites are related to the Iron Age (See **Figure 11**):

DK5, 6, 8, 11, 15 and 16 – These are scattered fragments of undecorated pottery in erosion dongas, found together with Stone Age material.

DK10 – S27.87293 E30.11986

DK17 – S27.88656 E30.11991

DK18 – S27.88713 E30.11921

DK19 – S27.86112 E30.15118

DK25 – S27.85295 E30.08562

DK27 – S27.86763 E30.06644

Of these only site DK16-19 and DK25 and 27 have stone walling. The other sites only contain scatters of out of context undecorated potsherds. Sites DK25 and DK27 (which falls just outside the study area) will not be impacted on by mining operations. The only site of any significance is therefore Site 17 (Site 18 is situated in close proximity to 17 and is probably part of the same settlement). It consists of at least 4 – 5 large circular enclosures (cattle kraals), as well as a number of smaller enclosures (huts?) and possible granary platforms. The site will be impacted on by mining operations (one of the opencast pits) and mitigation measures will be required.



Figure 16: Undecorated pottery DK2.



Figure 17: Undecorated pottery DK6.



Figure 18: Stone walling DK17.



Figure 19: Possible granary platform DK18.



Figure 20: Stone heaps DK25.

Historical sites

Most of the sites falling in this category are recent graves and grave sites, although 1 site consists of the remains of various structures. The age of these are not known exactly, but could date to between the 1920s to 1940's. The graves are mostly unknown stone packed graves without any headstones or inscriptions, although there are a number with headstones and known dates of death and individual identities.

Grave Site 1 (Site DK1)

This site contains at least 10 or more, mostly stone-packed, graves. Only 1 of the graves has a headstone with inscription. It belongs to **Lephina Nompahla who died in 1952**. The grave site will not be impacted on by opencast mining operations, but care should be taken not to disturb or destroy any of the graves. It is recommended that these graves and any others that might still be located in the area (even though they might not be directly impacted by mining operations), be fenced-in and properly managed. Mitigation measures regarding graves and grave sites will be put forward at the end of this report.

GPS Location: S27.91328 E30.14149



Figure 21: Grave of Lephina Nompahla on DK1.



Figure 22: Stone packed grave on DK1.

Grave Site 2 (Site DK3)

There are also around 10 graves located here. Most are stone packed, while 1 has a headstone with an inscription. It is the grave of **Tryphina Malevu who died in 1970**. The site will seemingly be impacted on by one of the opencast pits, and mitigation measures will have to be implemented.

GPS Location: S27.91883 E30.13014.



Figure 23: Grave site DK3.



Figure 24: Grave of Tryphina Malevu.

Grave Site 3 (Site DK4)

This is a single large stone packed grave. It is fenced in. The size of the grave could indicate the burial of someone of status, although this can also be determined through social consultation. The site will not be impacted by mining operations.

GPS Location: S27.90313 E30.14137.



Figure 25: Grave on Site DK4.

Grave Site 4 (Site DK13)

The site contains 2 stone packed graves, of which one is located within a large metal framework. The site might be impacted on by the mining operations.

GPS Location: S27.87698 E30.12287.



Figure 26: One of the graves on DK13.

Grave Site 5 (Site DK20)

This site contains at least 20 graves, of which one has a marble headstone and the other one a cement headstone. The rest are all stone packed. The site might be impacted on by mining operations. The one grave belongs to Sibusiso Zulu, born 1969 and died 1970, while the second grave is that of Robbinah Zulu who died on 26.12.1945.

GPS Location: S27.85963 E30.15759.



Figure 27: Grave site 5 (DK20).



Figure 28: Grave of Robbinah Zulu.



Figure 29: Grave of Sibusiso Zulu.

Grave Site 6 (DK21)

This site will not be impacted on by any mining operations and contains at least 4 fairly new graves with granite headstones. The site is fenced-in and could not be accessed. The graves all belong to the Mkhize family, and the oldest one (date of death) dates to 1978.

GPS Location: S27.86673 E30.15088.



Figure 30: Mkhize family graveyard (DK21).

Grave Site 7 (DK23)

This is another informal graveyard, bordered by stones. All the graves are stone packed. The site might be impacted on by mining operations (opencast pit), and as with the other sites mitigation measures will be required.

GPS Location: S27.84664 E30.09764.



Figure 31: Grave Site 7 (DK23).

Grave Site 8 (DK26)

The site contains a single stone packed grave, with the site bordered by stones. It has stone headstone that is painted white. The site will not be impacted on by mining operations.

GPS Location: S27.86626 E30.07298.



Figure 32: Grave Site 8 (DK26).

Homestead Site (Site DK22)

This is the only site (over and above the graves) associated with the recent historical period in the area. It consists of the remains of a stone and brick built structure (homestead?), as well as the remains of various other structures (such as a kraal) on the site. The graves on DK23 are possibly related to the site. Although the age can not be determined exactly at this stage, it is possible that the house date to between the 1920's-1940's, but it could also have been inhabited much more recently. Evidence of old mining/quarrying is visible in the area close by, and this site could also have been utilized during the mining/quarrying activities.

The site is not significant, and the documentation done during the assessment is seen as sufficient mitigation. The site might be impacted on by the mining activities.

GPS Location: S27.84736 E30.09856.



Figure 33: Site DK22 homestead.

8. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it can be stated that the Heritage Impact Assessment (HIA) of the area was conducted successfully. A number of archaeological sites, features and objects were identified and recorded in the area, dating to the **Stone Age, Iron Age** as well as the more

recent **Historical** period. Last mentioned included a number of graves and grave sites. A total of 27 sites were identified, although there is potentially many more, especially in the erosion dongas criss-crossing the area. Of these 18 will seemingly be directly impacted by mining development such as the opencast pits. Mitigation measures will have to be implemented to minimize the negative impacts of the mining on these sites.

Eleven of the sites are related to the Stone Age (earlier to later Middle Stone Age), most represented by scatters of tools, flakes and cores in the erosion dongas and drainage lines. Some sites do however contain more dense concentrations of material that could indicate manufacturing sites. On a few of these sites we also recovered scatters of undecorated potsherds from the later Iron Age. **Twelve** sites date to the later Iron Age (of which 5 also contain stone tools). **Six** sites consist of stone walling, including livestock enclosures and other features such as possible granary stands. **Two** of these will be impacted on by the mining and mitigation measures will be required.

Nine historical sites, of which **8 are grave sites**, were identified although there could be many more graves scattered throughout the area. **Four** of the grave sites might need mitigation measures, although all graves and grave sites should be treated with caution.

The significance ratings of the sites that will require mitigation is as follows (see Appendix B):

Stone Age

DK7-11 and 14-16: Significance is **Medium to High**

Mitigation Measures required: **Mapping of sites, surface sampling of material. A Permit will be required from Amafa.**

Iron Age

DK17&18: Significance is **Medium to High**

Mitigation Measures required: **Mapping of sites and limited archaeological excavations. A Permit will be required from Amafa.**

Grave Sites

It should be mentioned that graves sites are always rated as having High Significance.

DK3 (Grave site 2), DK13 (Grave site 4), DK20 (Grave site 5) and DK23 (Grave site 7) will be impacted by the development.

Mitigation measures required: All the grave sites that will not be directly impacted will have to be fenced-in and managed (Graves Management Plan drafted). For the graves that will be directly and negatively impacted the following is recommended:

- (a) If the sites can be left in tact they need to be fenced and managed and access provided to descendants for visiting the graves

- (b) If they can not be left in tact then the graves will have to be exhumed and relocated. This will entail detailed social consultation with local communities and family members, as well as following all necessary legal procedures required when graves are exhumed and relocated. A permit from Amafa (for all graves older than 60 years of age and unknown), as well as Local Health permits (the undertakers) for graves younger than 60 years of age will also be required.

If all the mitigation measures recommended here are implemented, then there will be no objection to the development taking place from a Cultural Heritage (Archaeological and Historical) point of view.

Finally, it should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts are always a distinct possibility. Care should therefore be taken during any development activities that if any of these are accidentally discovered, a qualified archaeologist be called in to investigate.

9. REFERENCES

Location Maps and Google Earth images of location and layout: Ikwezi Mining

Aerial view of Site Distribution: Courtesy Google Earth 2011

Topographic Location of development: Courtesy Map Source 2010

Coertze, P.J. & Coertze, R.D. 1996. **Verklarende vakwoordeboek vir Antropologie en Argeologie**. Pretoria: R.D. Coertze.

Duxbury, G.R. 1981. The Battle of Schuinshoogte, 8 February 1881. In: **Military History Journal First War of Independence 1880-1881 Centenary Issue. Vol.5 No.2 December 1980: pp.72-74.**

Knudson, S.J. 1978. **Culture in retrospect**. Chicago: Rand McNally College Publishing Company.

Korsman, S.A. & Meyer, A. 1999. Die Steentydperk en rotskuns. Bergh, J.S. (red.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies**. Pretoria: J.L. van Schaik.

Republic of South Africa. 1999. **National Heritage Resources Act** (No 25 of 1999). Pretoria: the Government Printer.

Republic of South Africa. 1998. **National Environmental Management Act** (no 107 of 1998). Pretoria: The Government Printer.

Van der Ryst, M.M. & Meyer, A. 1999. Die Ystertydperk. Bergh, J.S. (ed.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies**. Pretoria: J.L. van Schaik.

Chief Surveyor General for maps of farms: csg.www.gov.za

APPENDIX A

Definition of terms:

Site: A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

Structure: A permanent building found in isolation or which forms a site in conjunction with other structures.

Feature: A coincidental find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B

Cultural significance:

- Low A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.

- Medium Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.

- High Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

APPENDIX C

Heritage significance:

- Grade I Heritage resources with exceptional qualities to the extent that they are of national significance
- Grade II Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
- Grade III Other heritage resources of local importance and therefore worthy of conservation

APPENDIX D

Protection of heritage resources:

- Formal protection

National heritage sites and Provincial heritage sites – grade I and II

Protected areas - an area surrounding a heritage site

Provisional protection – for a maximum period of two years

Heritage registers – listing grades II and III

Heritage areas – areas with more than one heritage site included

Heritage objects – e.g. archaeological, palaeontological, meteorites, geological specimens,
visual art, military, numismatic, books, etc.

- General protection

Objects protected by the laws of foreign states

Structures – older than 60 years

Archaeology, palaeontology and meteorites

Burial grounds and graves

Public monuments and memorials