



Archaetnos Culture & Cultural
Resource Consultants
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**A REPORT ON A CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE
PROPOSED EXTENSION OF THE MINING AREA AT THE BELFAST SILICA
MINE, CLOSE TO BELFAST, MPUMALANGA PROVINCE**

For:

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REPORT NO.: AE01466V

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SUBMISSION OF REPORT

Please note that the South African Heritage Resources Agency (SAHRA) or one of its subsidiary bodies needs to comment on this report.

It is the client's responsibility to do the submission via the SAHRIS System on the SAHRA website.

Clients are advised not to proceed with any action before receiving the necessary comments from SAHRA.

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SUMMARY

Archaetnos cc was requested by Clean Stream Environmental Services to conduct a cultural heritage impact assessment (HIA) for the proposed extension of the mining area at the Belfast Silica Mine. The mine is situated on the remaining extent of Portion 1 of the farm Klipfontein 385 JS, approximately 8 km north of Belfast in the Mpumalanga Province.

The HIA survey was conducted according to generally accepted HIA practices and was aimed at locating all possible objects, sites and features of cultural significance in the area of proposed development. One sometimes looks a bit wider than the demarcated area, as the surrounding context needs to be taken into consideration.

If required, the location/position of any site was determined by means of a Global Positioning System (GPS), while photographs were also taken where needed. All sites, objects features and structures identified were documented according to the general minimum standards accepted by the archaeological profession. Co-ordinates of individual localities were determined by means of the Global Positioning System (GPS). The information was added to the description in order to facilitate the identification of each locality.

Two sites of cultural heritage significance were located in the surveyed area. These are of low significance and are discussed in detail in the report. The report is seen as ample documentation and the proposed development may therefore continue.

It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, a qualified archaeologist be called in to investigate the occurrence.

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1. INTRODUCTION

Archaetnos cc was requested by Clean Stream Environmental Services to conduct a cultural heritage impact assessment (HIA) for the proposed extension of the mining area at the Belfast Silica Mine. The mine is situated on the remaining extent of Portion 1 of the farm Klipfontein 385 JS, approximately 8 km north of Belfast in the Mpumalanga Province (Figure 1-3).

The study is done with the purpose of an Environmental Management Plan (EMP) as well as the Environmental Impact Assessment (EIA) process. The development entails the extension of existing mining activities on the property and the substance to be mined is quartzite.

The client indicated the area to be surveyed (Figure 4). The field survey was confined to these areas and was done via four track vehicle and a foot survey.

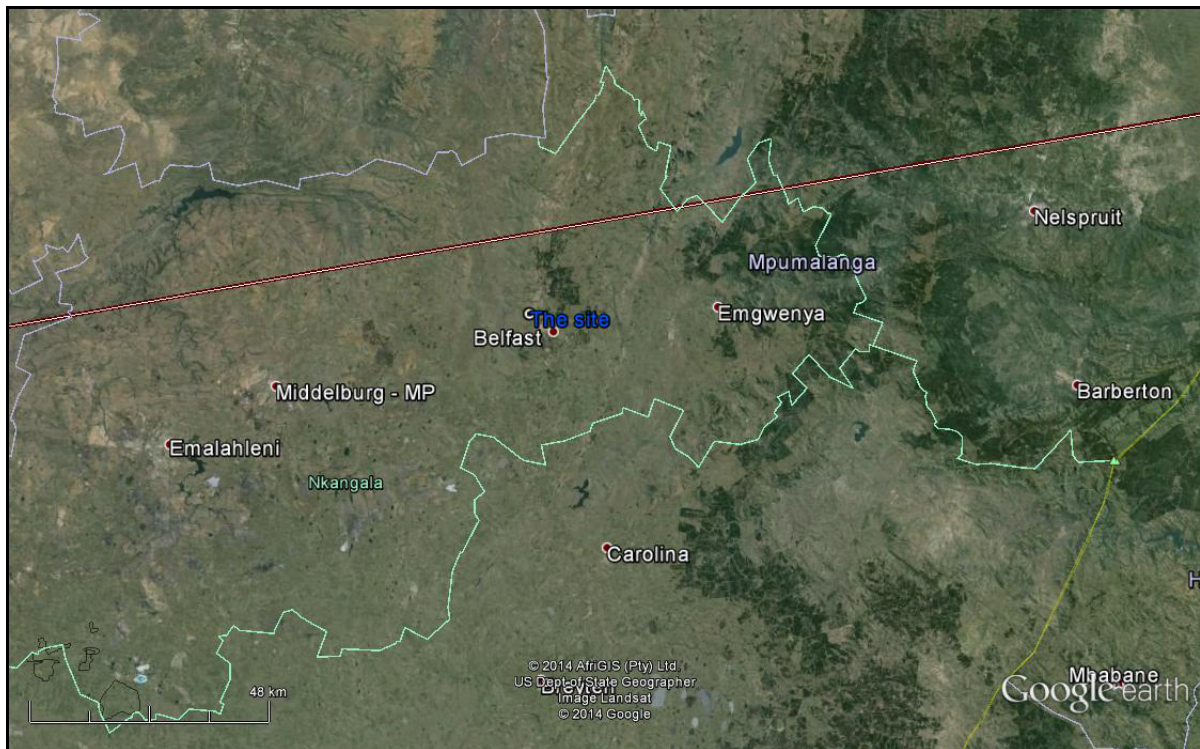


Figure 1: Location of the surveyed site and the town of Belfast in the Mpumalanga Province. North reference is to the top of the image.



Figure 2: Location of the site in relation to the town of Belfast. North reference is to the top.

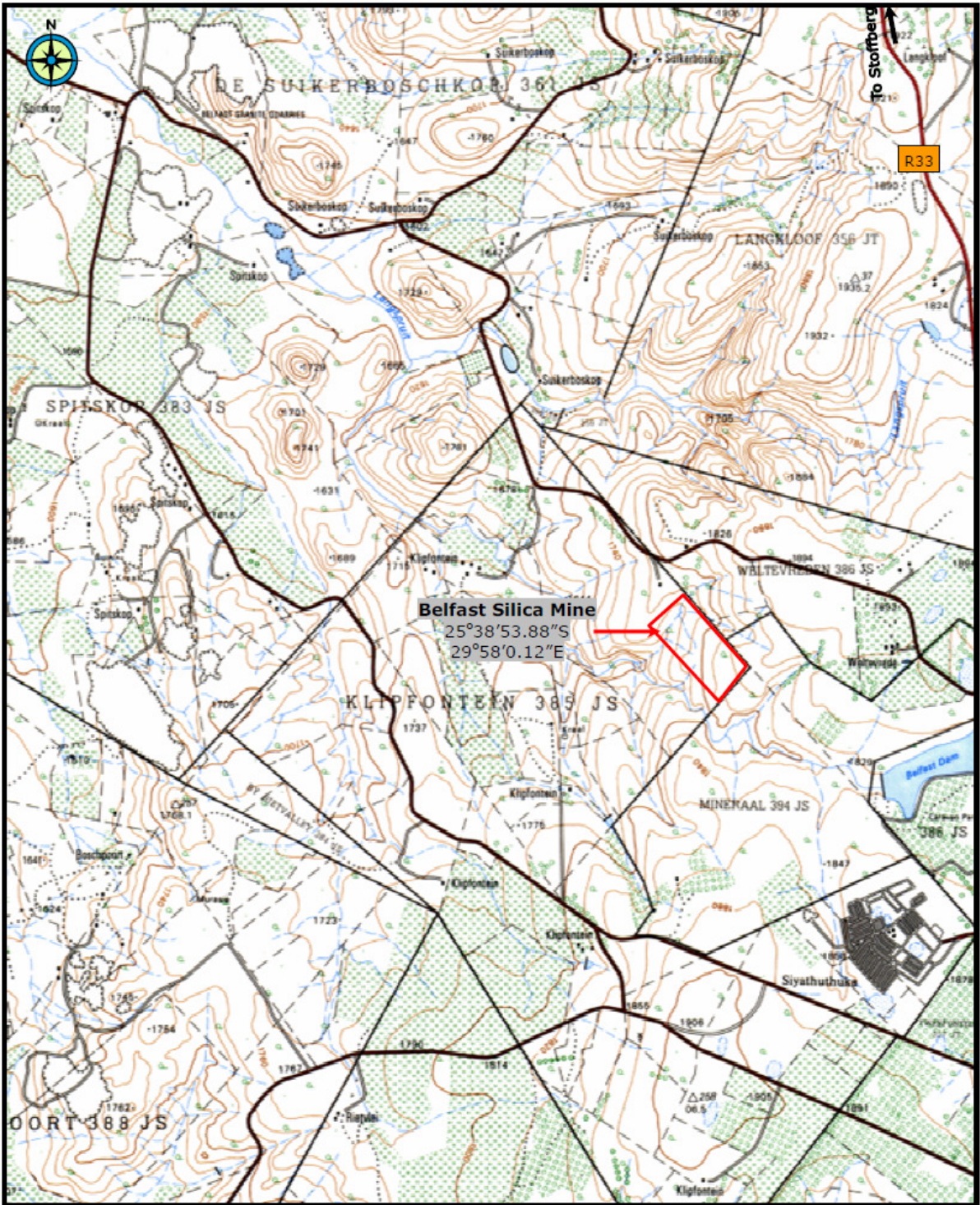


Figure 3: Map indicating the location of the mine.

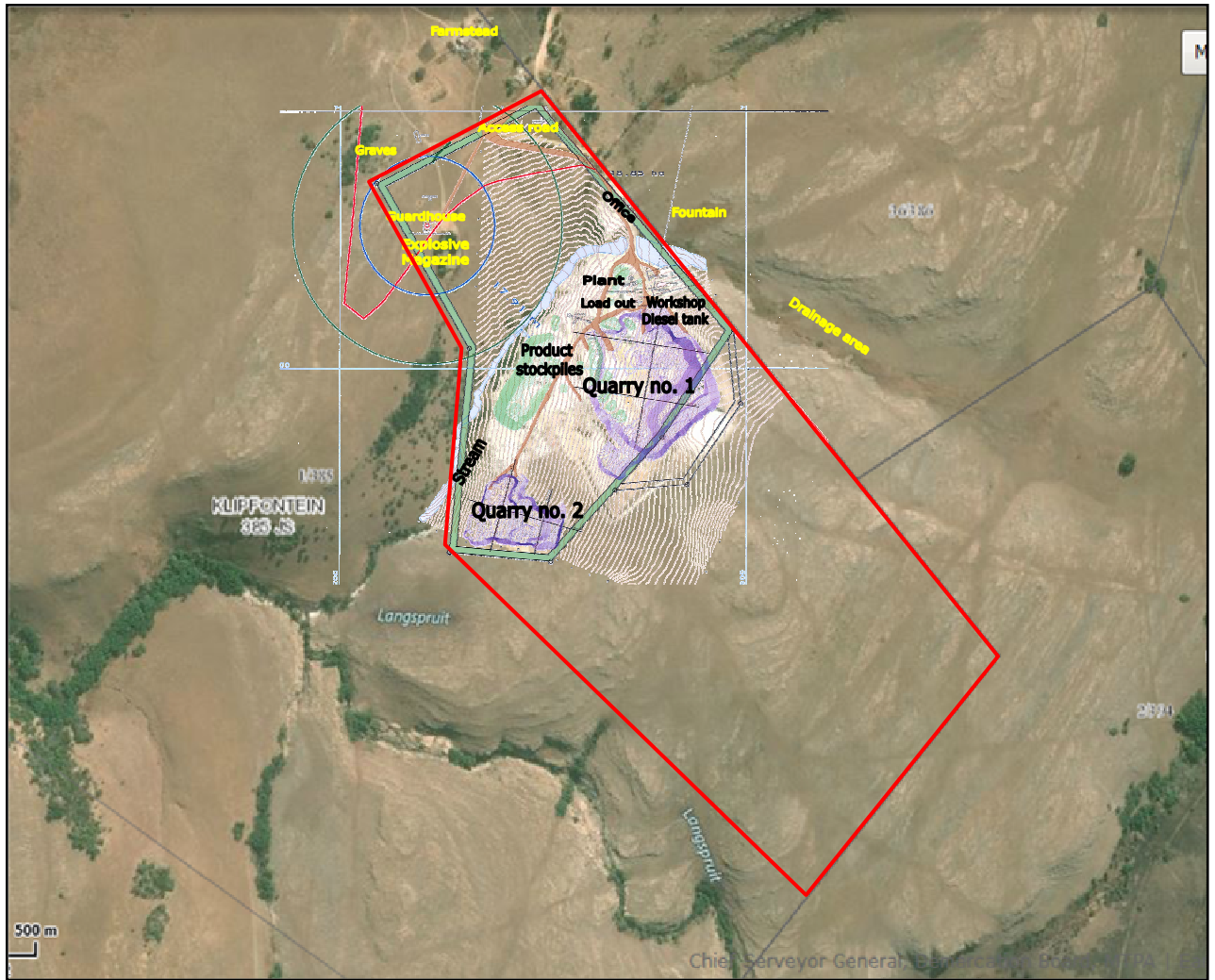


Figure 4: Layout of the site.

2. TERMS OF REFERENCE

The Terms of Reference for the survey were to:

1. Identify objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the property (see Appendix A);
2. Study background information on the area to be developed;
3. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value (see Appendix B);
4. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;

5. Recommend suitable mitigation measures to minimize possible negative impacts on the cultural resources by the proposed development; and
6. 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 (Appendix A). 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 C);
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; and
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 occur.
7. In this case there were certain areas where the vegetation cover had an extremely dense under-footing, which had a negative effect on the vertical archaeological visibility. The horizontal archaeological visibility was good as the vegetation cover was low, with only a few shrubs here and there.

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 (Act No. 25 of 1999)

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; and
- 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. Archaeological and paleontological importance;
- g. Graves and burial grounds;
- h. Sites of significance relating to the history of slavery; and
- i. Movable objects (e.g. archaeological, paleontological, 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 only looks at archaeological resources. The different phases during the HIA process are described in Appendix E.

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;and
- 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 paleontological site or any meteorite;
- b. Destroy, damage, excavate, remove from its original position, collect or own any archaeological or paleontological 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 paleontological material or object, or any meteorite; or
- d. Bring onto or use at an archaeological or paleontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and paleontological material or objects, or use such equipment for the recovery of meteorites; and
- 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; and
- f. Human remains.

In terms of Section 36(3) of the National Heritage Resources Act (Act No. 25 of 1999), no person may, without a permit issued by the relevant heritage resources authority:

- a. Destroy, damage, alter, exhume or remove from its original position or 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.

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

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 No. 65 of 1983 as amended)**.

4.2 The National Environmental Management Act (Act No. 107 of 1998)

This act (Act No. 107 of 1998) 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. THE INTERNATIONAL FINANCE CORPORATIONS' PERFORMANCE STANDARD FOR CULTURAL HERITAGE

This standard recognizes the importance of cultural heritage for current and future generations. It aims to ensure that clients protect cultural heritage in the course of their project activities.

This is done by clients abiding to the law and having heritage surveys done in order to identify and protect cultural heritage resources via field studies and the documentation of such resources. These need to be done by competent professionals (e.g. archaeologists and cultural historians). Possible chance finds, encountered during the project development, also needs to be managed by not disturbing it and by having it assessed by professionals.

Impacts on the cultural heritage should be minimized. This include the possible maintenance of such sites in situ, or when impossible, the restoration of the functionality of the cultural heritage in a different location. When cultural historical and archaeological artifacts and structures need to be removed is should be done by professionals and by abiding to the applicable legislation. The removal of cultural heritage resources may however only be considered if there are no technically or financially feasible alternatives. In considering the removal of cultural resources, it should be outweighed by the benefits of the overall project to the effected communities. Again professionals should carry out the work and adhere to the best available techniques.

It is necessary to engage into consultation with affected communities. This entails that access to such communities should be granted to their cultural heritage if this is applicable. Compensation for the loss of cultural heritage should only be given in extra-ordinary circumstances.

Critical cultural heritage may not be impacted on. Professionals should be used to advise on the assessment and protection thereof. Utilization of cultural heritage resources should always be done in consultation with the effected communities in order to be consistent with their customs and traditions and to come to agreements with relation to possible equitable sharing of benefits from commercialization.

6. METHODOLOGY

6.1 Survey of literature

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

6.2 Field survey

The survey was conducted according to generally accepted HIA practices and was aimed at locating all possible objects, sites and features of cultural significance in the

area of proposed development. One sometimes looks a bit wider than the demarcated area, as the surrounding context needs to be taken into consideration.

If required, the location/position of any site was determined by means of a Global Positioning System (GPS)¹, while photographs were also taken where needed. The survey was undertaken by doing a physical survey via off-road vehicle and on foot and covered as much as possible of the area to be studied (Figure 5).

Certain factors, such as accessibility, density of vegetation, etc. may however influence the coverage. The size of the investigated area is 31.82 Ha and the survey took four hours to complete².



Figure 5: GPS track of the surveyed area.

6.3 Oral histories

People from local communities are 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.

¹ A Garmin Oregon 550/ Garmin Montana 650/ Garmin eTrex with an accuracy factor of a few meters.

² Two persons both with GPS devices.

6.4 Documentation

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

6.5 Evaluation of Heritage sites

The evaluation of heritage sites is done by giving a field rating of each (see Appendix C) using the following criteria:

- The unique nature of a site;
- The integrity of the archaeological deposit;
- The wider historic, archaeological and geographic context of the site;
- The location of the site in relation to other similar sites or features;
- The depth of the archaeological deposit (when it can be determined or is known);
- The preservation condition of the site;
- Uniqueness of the site; and
- Potential to answer present research questions.

7. DESCRIPTION OF THE ENVIRONMENT

The topography of the surveyed area is reasonably steep, mainly falling from south-east to north-west. The mine is situated on the western slope of a mountainous area (Figure 6-7). Two rivers drain the area, the first being just outside of the south-western boundary of the mine, running in a north-western direction, and the second running in a south-western direction, flowing through the northern section of the site and then merging with the other outside of the boundary. The topography therefore also falls reasonably steep close to these rivers. Many loose rocks lie throughout the area. These mainly include quartzite and sandstone.

The surveyed area can be divided into three sections. The middle section consists of the current mining activities (Figure 8) and therefore has been totally disturbed.

The southern section is the one where future mining is planned. The vegetation mostly consists of grass with a few shrubs in between. The vegetation cover is dense, but with a low height (Figure 9) resulting in the horizontal archaeological visibility being good, but the vertical archaeological visibility being low. This means that it would be difficult to identify artefacts such as pottery and stone tools, but that features such as stone walling and graves should be easily identified.

The northern section also shows signs of being disturbed in the recent past. The landscape features are that of rolling hills. The southern slope however consists of terraces that were used for small scale agriculture until recently (Figure 10-11). The grass cover is low with a few black wattle trees being an indication of former plantations.



Figure 6: General view of the southern section within the surveyed area.



Figure 7: Another view of the surveyed area indicating the fall towards one of the rivers.



Figure 8: Current mining operations within the surveyed area.



Figure 9: View of vegetation in the southern section of the surveyed area.



Figure 10: General view of the northern section of the surveyed area. Note the agricultural terraces.



Figure 11: General view of the northern section of the surveyed area.

8. HISTORICAL CONTEXT

As indicated two sites of cultural heritage significance were located in the surveyed area. In order to place this within context and to understand possible finds that could be unearthed during construction activities, it is necessary to give a background regarding the different phases of human history in the area.

8.1 Stone Age

The Stone Age is the period in human history when lithic 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; and
- Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

The environment around Belfast is not one known for containing Stone Age sites. This may be a result of not much research having been done here. However, no Stone Age sites are indicated on a map contained in a historical atlas of this area (Bergh 1999: 4). The closest known Stone Age occurrences are Late Stone Age sites at Carolina and Badplaas, and rock painting sites close to Machadodorp, Badplaas and Carolina (Bergh 1999: 4-5).

The environment of the surveyed area is such that it does provide natural shelter, however likely at some distance away. It therefore is possible that Stone Age people did not settle inside of the surveyed area, but perhaps in nearby caves or rock shelters. They would definitely have been lured to the area due to an abundance of wild life as the occurrence of water and natural vegetation would have provided ample grazing. One may therefore find open air sites or occasional stone tools in the surveyed area.

8.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal 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.; and
- 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.; and
- Late Iron Age (LIA) 1300 – 1840 A.D.

In an area around Belfast, including Lydenburg, Nelspruit, Machadodorp and Badplaas a number of 1 792 Iron Age sites have been identified (Bergh 1999: 7). These all are dated to the Late Iron Age. Sites such as these are known for extensive stone building forming settlement complexes. No indication of metal smelting was identified at any of these sites (Bergh 1999: 8).

It is also known that the early trade routes did not run through this area (Bergh 1999: 9). However one should bear in mind that many of these areas may not have been surveyed before and therefore the possibility of finding new sites is always a reality.

One Late Iron Age/ Historical site was found during the survey. The type of environment is suitable for human habitation as ample building material, water, grazing and fuel are available. One would therefore expect that Iron Age people may have utilized the area. This is the same reason why white settlers later on moved into this environment.

8.3 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. This era is sometimes called the Colonial era or the recent past.

Due to factors such as population growth and a decrease in mortality rates, more people inhabited the country during the recent historical past. Therefore and because less time has passed, much more cultural heritage resources from this era have been left on the landscape. It is important to note that all cultural resources older than 60 years are potentially regarded as part of the heritage and that detailed studies are needed in order to determine whether these indeed have cultural significance. Factors to be considered include aesthetic, scientific, cultural and religious value of such resources.

At the beginning of the 19th century the Phuthing, a South Sotho group, stayed to the south of Belfast. The Koni of Makopole stayed to the north-east and the Ndzundza Ndebele to the west. During the Difaquane they fled to the south, south-west and north-west as Mzilikazi's impi moved in from the southeast. During this time the Swazi also moved into this area (Bergh 1999: 10-11; 109).

The first white traveler to visit these surroundings was Robert Scoon in 1836 (Bergh 1999: 13). The area around Belfast, stretching as far as the Kruger Park, Middelburg and Ohrigstad, was first traded from the Swazi in 1846. White farmers therefore only settled here after this date (Bergh 1999: 16, 133).

The town of Belfast was established in 1890 and by the 1890's this area was inhabited by many white farmers (Bergh 1999: 21). Just to the south of the town, on the farm Wemmershuis, the remains of an old coach house were identified. This is on the old trade route between Middelburg and the far eastern Transvaal (Van Vollenhoven 2008: 14). A map from Bulpin (1974) shows that the eastern railway line went through Belfast and one can assume that this was an important stop for

travelers. The reason is that the road forks here to the north in the direction of Ohrigstad and Lydenburg and to the east in the direction of Nelspruit.

During the Anglo-Boer War the area around Belfast saw much action. The last of the conventional military encounters between the British and Boer forces were that of the Battle of Bergendal, sometimes called the Battle of Dalmanutha. The battle took place between 21 and 27 August 1900.

On 21-22 August skirmishes started on the farm Van Wyksvlei, to the south of Belfast. This was followed by an attack on 23 August by the British on the Boer forces on the farm Geluk. Later that day the Boers at Dalmanutha were also under attack. The final phase of the battle was at Bergendal on 27 August 1900 (Van der Westhuizen & Van der Westhuizen 2000: 218-220). The Boers retrieved from the scene and the British could continue their advance to the Lowveld.

On 24 August 1900 the British occupied Belfast. In the town they had three concentration camps for Boer women and children (Van der Westhuizen & Van der Westhuizen 2000: 211-214). After the British reached Komatipoort on 24 September 1900, they erected blockhouses and other fortifications along the railway line in order to safeguard this from the Boers (Van Vollenhoven 1995: 86). The remains of two of these are found to the south of the railway line at Belfast (Van Vollenhoven 2008: 15). During the night of 7-8 January 1901 the Boers attacked Belfast and started against the blockhouses on Monument hill (Van der Westhuizen & Van der Westhuizen 2000: 217).

One may therefore expect to find farm buildings, structures and objects in the area. Many graveyards from this period in time have been identified in surrounding areas during past surveys. Historical graves have also been found at Wemmershuis, just to the south of Belfast previously (Archaetnos database). One should therefore be on the lookout for graves in the surveyed areas. One such site was indeed noted, although outside of the surveyed area.

9. DISCUSSION OF SITES IDENTIFIED DURING THE SURVEY

9.1 Site 1 – Late Iron Age/ Historical stone kraal

This is a singular circular stone structure, which most likely serves as livestock outpost. The remaining walls are approximately 30 cm high, 20 cm wide and the structure has a diameter of about 15 m without a clear entrance (Figure 12).

GPS: 25° 39' 09.8"S
29° 58' 18.1"E

The site is most likely linked to an unknown stone walled complex nearby. It however has no special features or a deep deposit and therefore is regarded as having a low cultural significance. The field rating thereof is regarded as General protection, C (IV C).

This report is therefore seen as ample mitigation. The site has been sufficiently recorded and may be demolished.



Figure 12: A section of the stone walling at site no. 1.

9.2 Site 2 – Historical clay ruin

This is the ruin of a historical building, most likely a house, made from clay (Figure 13). It is a rectangular structure with sides of approximately 8 m x 6 m and seems to consist of at least four rooms. It most likely is linked to the agricultural terraces indicated earlier, which are located a few metres to the north-east thereof.

GPS: 25° 38' 51.4"S
29° 58' 08.3"E

The site does not show any other associated features or an archaeological deposit. It may be older than 60 years, but since houses of farm workers is still built in a similar way in the surrounding area, it is regarded as having a low cultural significance. The field rating thereof is regarded as General protection, C (IV C).

This report is therefore seen as ample mitigation. The site has been sufficiently recorded and may be demolished.



Figure 13: Clay walled ruin.

10. CONCLUSION AND RECOMMENDATIONS

The survey of the indicated area was completed successfully. As indicated, two sites of cultural heritage importance were identified (Figure 14).

The following is recommended:

- The proposed development may continue; and
- It should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, a qualified archaeologist be called in to investigate the occurrence.



Figure 14: Google image indicating the location of the two sites identified.

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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

DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE:

- Historic value:** Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.
- Aesthetic value:** Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.
- Scientific value:** Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period
- Social value:** Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.
- Rarity:** Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.
- Representivity:** Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

APPENDIX C

SIGNIFICANCE AND FIELD RATING:

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.

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

Field ratings:

National Grade I significance	should be managed as part of the national estate
Provincial Grade II significance	should be managed as part of the provincial estate
Local Grade IIIA	should be included in the heritage register and not be mitigated (high significance)
Local Grade IIIB	should be included in the heritage register and may be mitigated (high/ medium significance)
General protection A (IV A)	site should be mitigated before destruction (high/ medium significance)
General protection B (IV B)	site should be recorded before destruction (medium significance)
General protection C (IV C)	phase 1 is seen as sufficient recording and it may be demolished (low significance)

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

APPENDIX E

HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or scoping phase – establishment of the scope of the project and terms of reference.
2. Baseline assessment – establishment of a broad framework of the potential heritage of an area.
3. Phase I impact assessment – identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – if there is no likelihood that any sites will be impacted.
5. Phase II mitigation or rescue – planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III management plan – for rare cases where sites are so important that development cannot be allowed.