



Archaetnos Culture & Cultural
Resource Consultants
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**A REPORT ON A CULTURAL HERITAGE IMPACT ASSESSMENT FOR THE
PROPOSED MANUNGU COLLIERY, CLOSE TO DELMAS, MPUMALANGA
PROVINCE**

For:

Eco-gain Consulting
Suite 590
Private Box X1
The Willows
0041

REPORT NO.: AE01364V

By:

Dr. A.C. van Vollenhoven (L.AKAD.SA.)
Accredited member of ASAPA
Professional member of SASCH

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Archaetnos
P.O. Box 55
GROENKLOOF
0027
Tel: 083 291 6104
Fax: 086 520 4173
E-mail: antonv@archaetnos.co.za

Member: AC van Vollenhoven BA, BA (Hons), DTO, NDM, MA (Archaeology) [UP], MA (Culture History) [US], DPhil (Archaeology) [UP], Man Dip [TUT], D Phil (History) [US]

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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 Eco-gain Consulting to conduct a cultural heritage impact assessment for the proposed Manungu Colliery. This is on various portions of the farm Weilaagte 271 IR as well as portion 1 of the farm Welgevonden 272 IR. This is close to Delmas in the Mpumalanga Province.

A survey of the available literature was undertaken in order to obtain background information regarding the area. This was followed by the field survey which was conducted according to generally accepted HIA practices, aimed at locating all possible objects, sites and features of cultural significance in the area of the proposed development.

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

During the survey six sites of cultural heritage significance were located in the mining right area. These are discussed in the report. Five of these are grave sites and are of high cultural significance. The other one are some farm buildings which are of low cultural significance.

It seems as if four of these will be impacted on directly by the proposed mining activities and infrastructure development. The others will however be impacted on indirectly. Therefore the necessary mitigation measures are proposed. The development may continue after implementation thereof.

It should be noted however that the subterranean presence of archaeological and/or historical sites, features or artifacts is always a distinct possibility. In this particular case there indeed is a fair chance of sites like graveyards being found later on as the vegetation cover was extremely high, making archaeological visibility extremely difficult. Care should therefore be taken when the development commences further that if any of these are discovered, a qualified archaeologist be called in to investigate.

It should be noted that it is the client's responsibility to do the submission of this report via the SAHRIS System on the SAHRA website. No work on site may commence before receiving the necessary comments from SAHRA.

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1. INTRODUCTION

Archaetnos cc was requested by Eco-gain Consulting to conduct a cultural heritage impact assessment for the proposed Manungu Colliery. This is on 5, 6, 7, 8 and 9 of the farm Weilaagte 271 IR as well as portion 1 of the farm Welgevonden 272 IR. This is close to Delmas in the Mpumalanga Province (Figure 1-3).

The development entails the mining of coal by means of an opencast operation, the construction of haul roads as well as the erection of the necessary infrastructure for this purpose (Figure 4). The client indicated the areas to be surveyed. The field survey was confined to this area.

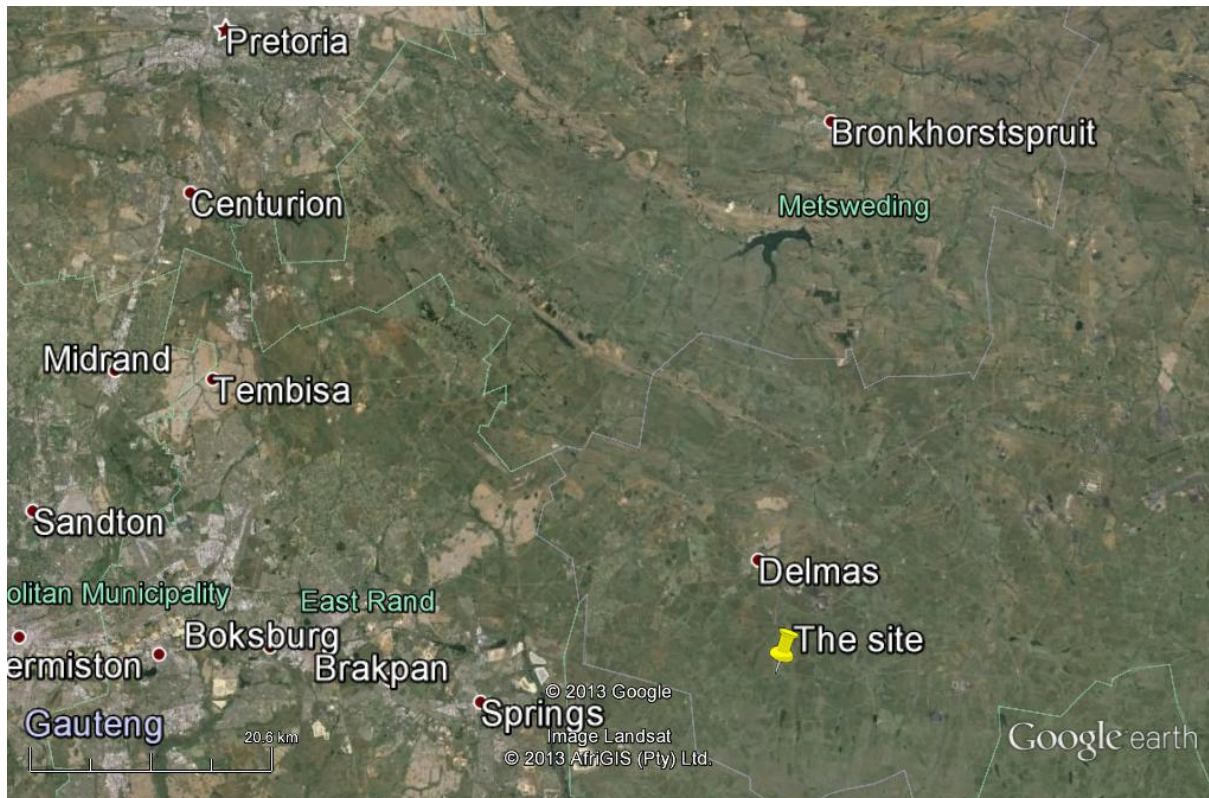


Figure 1 Location of the surveyed site in Mpumalanga. North reference is to the top of the map.



Figure 2 Location of the site in relation to the town of Delmas in Mpumalanga. North reference is to the top.

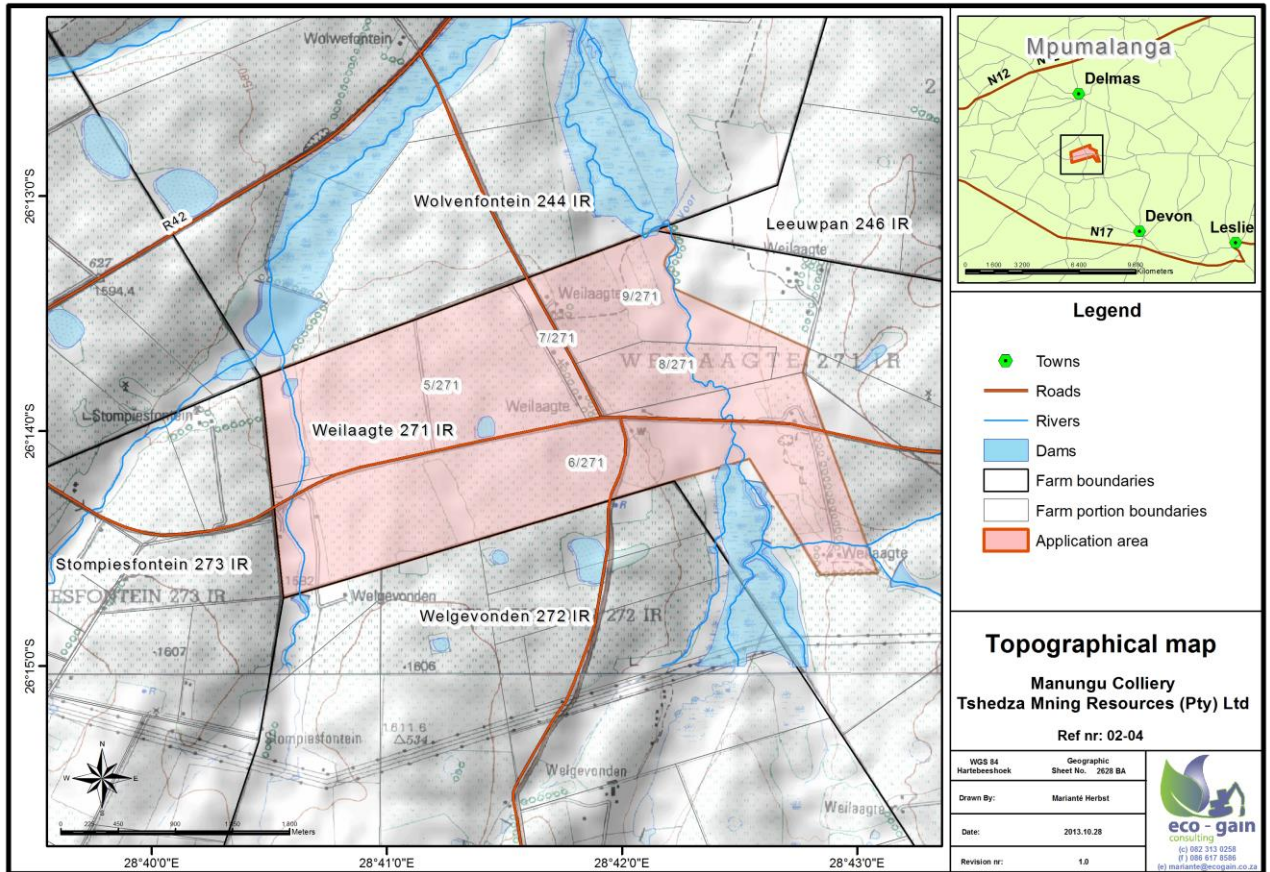


Figure 3 Map of the surveyed area.

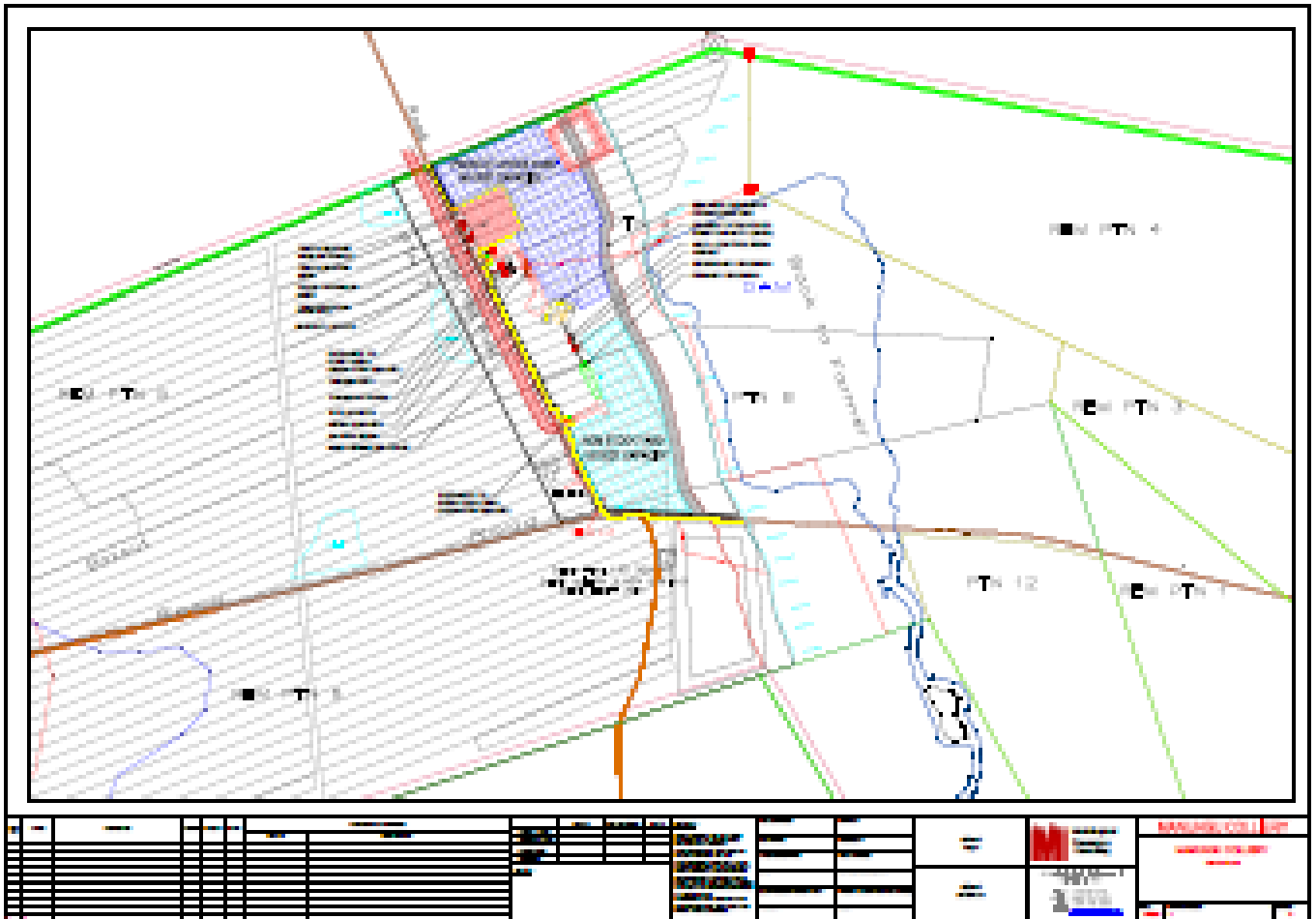


Figure 4 Map indicating the development and mining plan for the site.

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.

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.
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. In this case a few sections of the surveyed area were covered in medium high, but dense grass, therefore negatively affecting archaeological visibility.

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. Archaeological and paleontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- 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
- 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.
- 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.

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 65 of 1983 as amended)**.

4.2 The National Environmental Management Act

This act (Act 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 also 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 regularly 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 a physical survey via off-road vehicle and on foot (Figure 5). The size of the investigated area is approximately 660 Ha and the survey took four hours to complete.

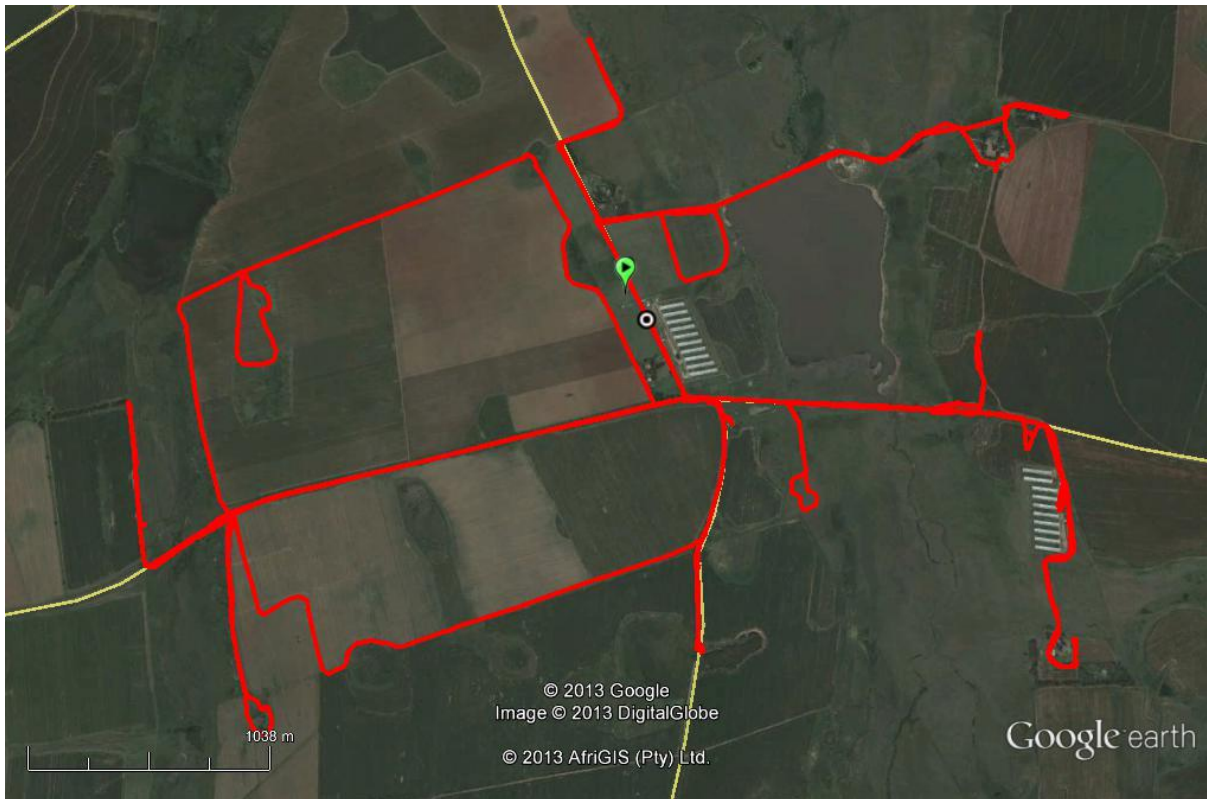


Figure 5 GPS track of the surveyed area. North reference is to the top.

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.

6.4 Documentation

All sites, objects, features and structures identified were documented according to the general minimum standards accepted by the archaeological profession. Coordinates 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.

¹ A Garmin Oregon 550 with an accuracy factor of a few meters.

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 surveyed area has been disturbed to a large extent by recent human activities. Almost the entire area has been extensively used for agriculture. During the surveyed the crops have been gathered and the agricultural fields were laying bare (Figure 6). Here and there the vegetation cover was dense, consisting of medium sized grass. A small area shows signs of former mining activities (Figure 8). A few large man-made dams and the chicken broilers of two large chicken farms, complete the picture (Figure 9).

The environment is drained by two rivers and its tributaries, one in the east and one in the west of the surveyed area. The topography is basically flat with a gentle slope toward the river. No natural outcrop is evident.



Figure 6 Bare agricultural fields in the surveyed area.



Figure 7 One of the areas showing natural medium sized grass.



Figure 8 One of the dams in the surveyed area and an area indicating previous mining activities.



Figure 9 Chicken broilers in the surveyed area.

8. HISTORICAL CONTEXT

Six sites of cultural heritage significance were located in the surveyed area. In order to enable the reader to understand this, the history of the broader geographical area as well as possible finds that could be unearthed during construction activities, it is necessary to give a background regarding the different phases of human history.

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
Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

The closest Stone Age occurrence found to the Delmas area is the Late Stone Age site at Fort Troje, close to Cullinan (Bergh 1999: 4). This probably only indicates a lack of research as the area definitely is suitable for human occupation.

However, no natural shelters were seen during the survey and therefore it is possible that these people did not stay here for long times. The good vegetation would however have created ample grazing, making it a prime spot for hunting during the

past. Therefore one may assume that Stone Age people probably would have moved through the 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.

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.

Bergh (1999: 7) does indicate that Late Iron Age sites have been identified in the Delmas area, but gives no additional detail. During the Difaquane (1832) the Zulu moved through this area in order to attack the Ndebele (Bergh 1999: 11). This indicates that Iron Age people probably utilized this environment in the past.

However, during the survey no such sites were identified. The good grazing in the area would have provided a good environment for Iron Age people although building material seem to be reasonably scarce. One would therefore expect that Iron Age people may have utilized the area. This is the same reason why white settlers moved into this environment later on.

8.3 Historical Age

The Historical Age started with the first recorded oral histories in the area. It includes the in-migration of people that were able to read and write. The first early traveler who visited this area was Robert Scoon who passed through during 1836. In 1847 Dr. David Livingstone also visited the area during his travels. The parties of the Voortrekkers Louis Tregardt and Hans van Rensburg also moved through here during 1836 (Bergh 1999: 13-14). White farmers only settled in the study area between 1841 and 1850 (Bergh 1999: 15).

One may therefore expect to find farm buildings and objects in the area. Many graveyards have been identified in surrounding areas during past surveys (Archaetnos database). Five of the sites founds were indeed grave yards.

9. DISCUSSION OF SITES IDENTIFIED DURING THE SURVEY

The six sites of cultural heritage importance that were identified all date to the Historical Age. As indicated there always is a possibility that some sites may have been missed. In such a case it should be handled in accordance with the recommendations in this report.

9.1 Site 1 – graves

This is a site containing of at least 42 graves (Figure 10). Many different types of grave dressing are found – stones, bricks, granite and cement. Some of the graves have headstones made of stone, granite or cement, while others do not have headstones.

Some of the surnames that were identified are Masango, Mtsweni and Mabena. The dates of death identified vary between 1960 and 1981. Therefore two of the three categories of graves were identified, being those without a date of death (called unknown graves) and those younger than 60 years. Unknown graves are handled similarly to heritage graves. Unknown graves count 36 and those younger than 60 years 6.

GPS: 26°14.235'S
28°40.518'E



Figure 10 Some of the graves at site no. 1.

Graves are always regarded as having a **high** cultural significance. The field rating thereof is Local Grade III B. It should be included in the heritage register, but may be mitigated.

Two possibilities exist. The first option would be to fence the graves in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger of being damaged, but where there will be a secondary impact due to the activities of the mine.

The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the mining activities. For this a specific procedure should be followed which includes social consultation. For graves younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

Site 1 is on the edge of the area indicated to be mined. Since it is opencast mining there will only be a direct impact on them and therefore option 2 is recommended. However, if it is possible not to mine the area, the mine can adapt the mine plan and rather go for option 1. They should then ensure that the graves are not impacted on directly (for instance by blasting activities).

9.2 Site 2 – graves

This is a site containing of at least 80 graves, but due to dense vegetation this may be an under representation (Figure 11). Most of the graves are stone packed, but many different types of grave dressing are found – stones, bricks, granite and cement. Some of the graves have headstones made of stone, granite or cement, while others do not have headstones. Some are fenced in.

Some of the surnames were identified, being Nyakele, Mabena, Mathe and Mototo. The dates of death identified vary between 1932 and 1998. Therefore all three of the categories of graves were identified, being those older than 60 years (called heritage graves), those without a date of death (called unknown graves) and those younger than 60 years. Unknown graves are handled similarly to heritage graves. Graves older than 60 years count 4, unknown graves 69 and those younger than 60 years 7.

GPS: 26°14.029'S
28°42.829'E

Graves are always regarded as having a **high** cultural significance. The field rating thereof is Local Grade III B. It should be included in the heritage register, but may be mitigated.

Two possibilities exist. The first option would be to fence the graves in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger

of being damaged, but where there will be a secondary impact due to the activities of the mine.

The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the mining activities. For this a specific procedure should be followed which includes social consultation. For graves younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

Site 2 lies in area where currently no development is being planned. Therefore there will be no direct impact. Resultantly 1 is recommended. However, the mine should ensure that the graves are not impacted on directly (for instance by blasting activities). Should this happen, option 2 will have to be engaged in.



Figure 11 Some of the graves at site no. 2.

9.3 Site 3 – graves

This is a site containing of at least 59 graves (Figure 12). Many different types of grave dressing are found – stones, bricks, granite and cement. Some of the graves have headstones made of stone, granite or cement, while others do not have headstones. Some graves are only marked with metal crosses.

Some of the surnames that were identified are Mbonani, Mgidi, Ntuli and Magwabo. The dates of death identified vary between 1967 and 1991. Therefore two of the three categories of graves were identified, being those without a date of death (called unknown graves) and those younger than 60 years. Unknown graves are

handled similarly to heritage graves. Unknown graves count 39 and those younger than 60 years 20.

GPS: 26°14.522'S
28°41.966'E



Figure 12 Some of the graves at site no. 3.

Graves are always regarded as having a **high** cultural significance. The field rating thereof is Local Grade III B. It should be included in the heritage register, but may be mitigated.

Two possibilities exist. The first option would be to fence the graves in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger of being damaged, but where there will be a secondary impact due to the activities of the mine.

The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the mining activities. For this a specific procedure should be followed which includes social consultation. For graves younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

Site 3 lies outside of any area of direct impact. Therefore option 1 is recommended. However, the mine should ensure that the graves are not impacted on directly (for

instance by blasting activities). Should this happen, it would be necessary to rather decide on option 2.

9.4 Site 4 – farm workers dwellings and shop

This is a number of buildings of which the most are younger than 60 years. The old shop and one of the dwellings are likely older than 60 years (Figure 13). However, these are not unique examples. It however is in quite a good condition.

GPS: 26°13.988'S
28°42.042'E



Figure 13 Some of the buildings at site no. 4.

The site is regarded as having a **low** cultural significance. The field rating thereof is General Protection, Grade C (IVC). It should be included in the heritage register, but this report is seen as ample mitigation.

The site is inside of the area that will be mined via opencast methods. Since the importance of the site is low, it may be demolished. In order to do so a permit would be needed from the Provincial Heritage Resources Agency (PHRA) of Mpumalanga).

9.5 Site 5 – graves

This is a site containing 2 graves (Figure 14). Both are stone packed and have cement headstones.

Only one surname is legible, being Mbonani. No dates of death could be identified. Therefore only one of the three categories of graves was identified, being those without a date of death (called unknown graves). Unknown graves are handled similarly to heritage graves.

GPS: 26°13.934'S
28°41.921'E



Figure 14 The two graves at site no. 5.

Graves are always regarded as having a **high** cultural significance. The field rating thereof is Local Grade III B. It should be included in the heritage register, but may be mitigated.

Two possibilities exist. The first option would be to fence the graves in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger of being damaged, but where there will be a secondary impact due to the activities of the mine.

The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the mining activities. For this a specific procedure should be followed which includes social consultation. For graves younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

Site 5 is on the edge of the area indicated to be mined. Since it is opencast mining there will only be a direct impact on them and therefore option 2 is recommended. However, if it is possible not to mine the area, the mine can adapt the mine plan and rather go for option 1. They should then ensure that the graves are not impacted on directly (for instance by blasting activities).

9.6 Site 6 – graves

This is a site that also contains 2 graves (Figure 15). Both are brick packed and have cement headstones. One of them also has a rusted bicycle as part of the grave dressing, presumably since it is the grave of a child.

No surnames or dates of death could be identified. Therefore only one of the three categories of graves was identified, being those without a date of death (called unknown graves). Unknown graves are handled similarly to heritage graves.

GPS: 26°13.346'S
28°41.609'E



Figure 15 The two graves at site no. 6.

Graves are always regarded as having a **high** cultural significance. The field rating thereof is Local Grade III B. It should be included in the heritage register, but may be mitigated.

Two possibilities exist. The first option would be to fence the graves in and have a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert. This usually is done when the graves are in no danger

of being damaged, but where there will be a secondary impact due to the activities of the mine.

The second option is to exhume the mortal remains and then to have it relocated. This usually is done when the graves are in the area to be directly affected by the mining activities. For this a specific procedure should be followed which includes social consultation. For graves younger than 60 years only an undertaker is needed. For those older than 60 years and unknown graves an undertaker and archaeologist is needed. Permits should be obtained from the Burial Grounds and Graves unit of SAHRA. This procedure is quite lengthy and involves social consultation.

Site 6 lies inside of the area of direct impact as this is where the stock yard is planned. Therefore option 2 is recommended. However, if it is possible to adapt the mine plan, it would be possible to rather go for option 1. They should then ensure that the graves are not impacted on directly (for instance by blasting activities).

10. CONCLUSION AND RECOMMENDATIONS

As indicated, six sites of cultural importance were identified during the survey (Figure 16). The survey of the indicated area was completed successfully.

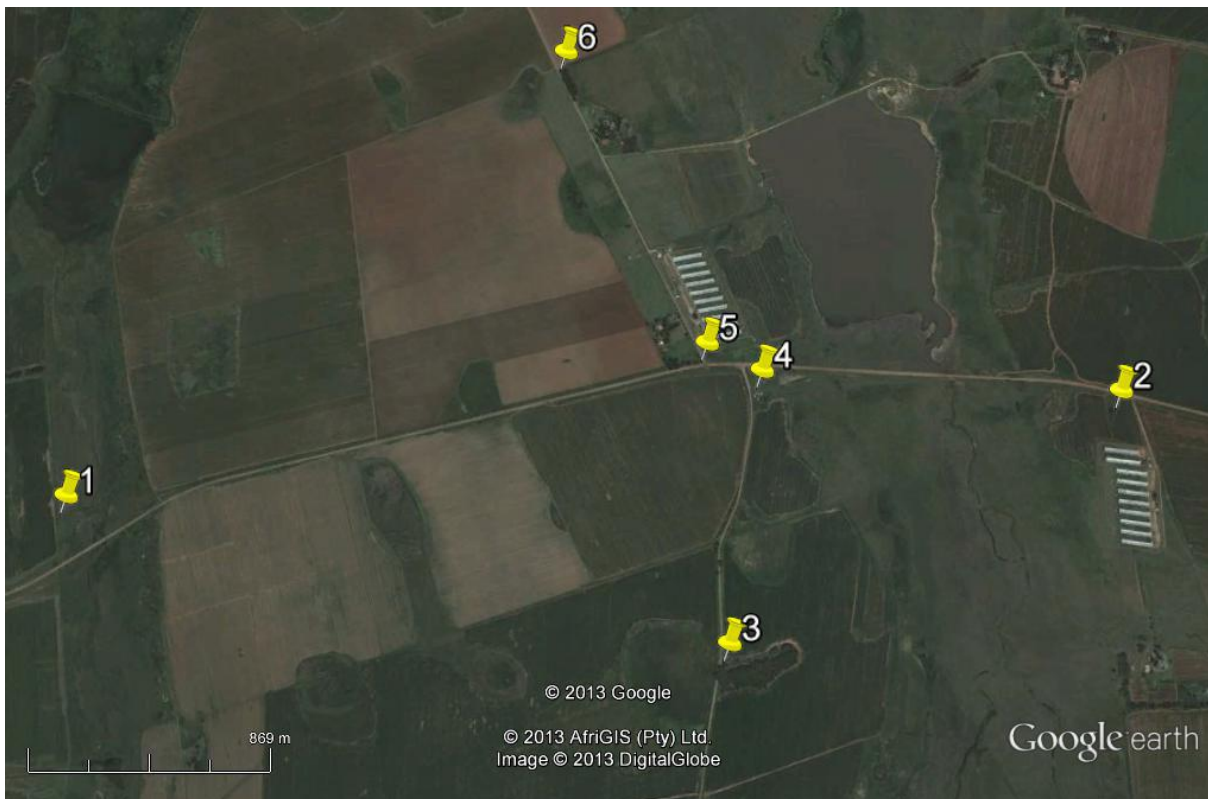


Figure 16 Google image indicating the sites found during the survey.

The following is recommended:

- The proposed development may continue, but only after implementation of the management measures indicated in this report.
- The grave sites should be mitigated. It should also be included in the heritage register.
- For sites number 2 and 3 mitigation would consist of option 1 since there will only be secondary impact on these. The graves should be fenced in and a management plan drafted for the sustainable preservation thereof. This should be written by a heritage expert.
- However, should it happen that impact becomes direct; option 2 will come into play.
- For site number 1, 5 and 6 the impact is direct and therefore option 2 is recommended. As indicated this needs to be done within the perimeters given by the Burial Grounds and Graves Unit of SAHRA.
- However, if it is possible not to mine the area, the mine can adapt the mine plan and rather go for option 1. They should then ensure that the graves are not impacted on directly (for instance by blasting activities).
- Site number 4 (farm workers dwellings and shop) is inside of the area that will be mined. The site however is seen as being of low cultural heritage significance. The impact will be direct since it is an opencast mining operation. The site may therefore be demolished. In order to do so a permit would be needed from the Provincial Heritage Resources Agency (PHRA) of Mpumalanga).
- 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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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:

- i. National Grade I significance should be managed as part of the national estate
- ii. Provincial Grade II significance should be managed as part of the provincial estate
- iii. Local Grade IIIA should be included in the heritage register and not be mitigated (high significance)
- iv. Local Grade IIIB should be included in the heritage register and may be mitigated (high/ medium significance)
- v. General protection A (IV A) site should be mitigated before destruction (high/ medium significance)
- vi. General protection B (IV B) site should be recorded before destruction (medium significance)
- vii. 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.