Archaetnos Culture & Cultural
Resource Consultants
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A REPORT ON AN ARCHAEOLOGICAL IMPACT ASSESSMENT (AIA) FOR PROPOSED MINING OPERATIONS ON THE REMAINDER OF THE FARM PALING 434, HAY MAGISTERIAL DISTRICT, NORTHERN CAPE

For:

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DISCLAIMER:

Although all possible care is taken to identify all sites of cultural importance during the survey of study areas, the nature of archaeological and historical sites are as such that it always is possible that hidden or subterranean sites could be overlooked during the study. Archaetnos and its personnel will not be held liable for such oversights or for costs incurred as a result thereof.

SUMMARY

Archaetnos cc was requested by Cultmatrix Heritage Consultants, on behalf of Kai Batla Holding Pty Ltd, to conduct an Archaeological Impact Assessment on the remainder of the farm Paling 434, in the Hay Magisterial District of the Northern Cape (near Postmasburg). New mining operations on the farm are being planned. Manganese was mined in the area in the past.

A number of sites of cultural (archaeological and historical) heritage significance were found in the area, dating to the Stone Age and more recent Historical period. Some of the historical sites are related to past mining activities on Paling. The report gives a discussion of these sites and also gives an indication of the methodology followed. It also indicates how to deal with any archaeological material that may be unearthed during future development activities.

The sites are of low to high significance. Mitigation measures to minimize the impact of the development on these sites are put forward at the end of this report. Once these have been implemented the development can continue.

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1. INTRODUCTION

Archaetnos cc was requested by Cultmatrix Heritage Consultants, on behalf of Kai Batla Holding Pty Ltd, to conduct an Archaeological Impact Assessment on the remainder of the farm Paling 434, in the Hay Magisterial District of the Northern Cape (near Postmasburg). New mining operations on the farm are being planned. Manganese was mined in the area in the past by ASSMANG. Large open pits, access roads and basic mine infrastructure is found in the area, although these will have to be rehabilitated to a large degree.

A number of sites of cultural (archaeological and historical) heritage significance were found in the area, dating to the Stone Age and more recent Historical period. Some of the historical sites are related to past mining activities on Paling. We were accompanied by the client, who indicated the boundaries of the area to be surveyed. The work was largely 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.

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.

7. In this particular case certain areas had a thick grass cover which made archaeological visibility difficult.

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 law 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 or scientific or technological value.

Archaeology, palaeontology and meteorites

Section 35(4) of this act states that no person may, without a permit issued by the responsible heritage resources authority:

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.

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.

5. METHODOLOGY

5.1 Survey of literature

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

5.2 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 (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 certain areas were traversed by vehicle.

5.3 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.

5.4 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. DESCRIPTION OF THE AREA

The surveyed area is located approximately 15km north of Postmasburg, on the remainder of the farm Paling 434, in the Hay Magisterial District of the Northern Cape. The area has been extensively mined in the past, more recently by ASSMANG (manganese and Iron ore). It is situated close to the existing Beeshoek Mine.

Large scale mining in the past has disturbed the area extensively, with open mining pits, access roads and mining infrastructure found throughout. Any archaeological and historical sites that existed here in the past would therefore have been disturbed or destroyed to a large

degree. Fairly dense grass and other vegetation cover also made archaeological visibility fairly difficult.

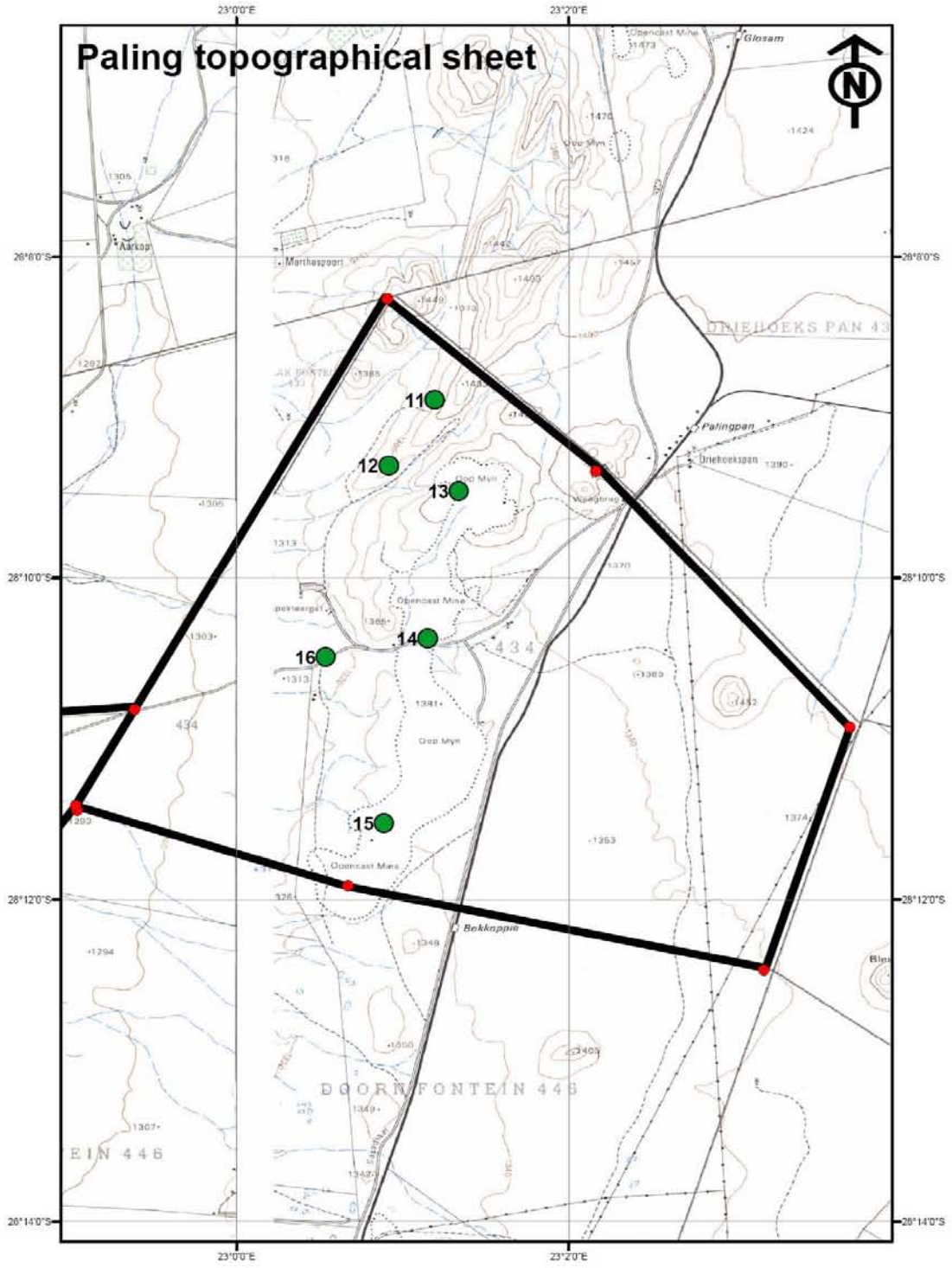

Figure 1: Location of the development (map courtesy of client)

Figure 2: General view of the area – note the open mine pits.

Figure 3: Another view of the area –
Note the dense grass cover.

7. DISCUSSION

During the survey seven sites of varying degrees of cultural (archaeological, historical) heritage significance was located in the survey area, dating to the Stone Age and more recent Historical period. 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 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.

Stone Age sites are known to occur in the larger geographical area, including the well-known Wonderwerk Cave in the Kuruman Hills to the east, Tsantsabane, an ancient specularite working on the eastern side of Postmasburg, Doornfontein, another specularite working north of **Beeshoek** and a cluster of important Stone Age sites near Kathu. Additional specularite workings with associated Ceramic Later Stone Age material and older Fauresmith sites (early Middle Stone Age) are known from Lylyfeld, Demaneng, Mashwening, King, Rust & Vrede, **Paling**, Gloucester and Mount Huxley to the north. Rock engraving sites are known from **Beeshoek** and Bruce (Morris 2005: 3).

The onset of the Middle Stone Age coincided with a widespread demand for coloured or glittering minerals that arose at the time for still unknown reasons. The intensive collection of such substances soon exhausted surface exposures and led to the quest being extended underground and thus to the birth of mining practice. Specularite was commonly mined in the Postmasburg area. In 1968 AK Boshier, working in collaboration with P Beaumont, found a number of underground specularite mines on Paling. Some of these still may exist and it is therefore proposed that such mining works should be surveyed, identified and verified. It may be argued that archaeological excavations in the area have already yielded information about the mines and the people who mined them. However, no such scientific work has been done on Paling (the excavations took place at Beeshoek). Besides, this happened in 1968 and since then archaeological research techniques and also the general knowledge about the area's Stone and Iron Age periods have vastly improved (de Jong 2010: 35).

A number of Stone Age sites and scattered finds of Stone Age material were identified on Paling during this survey. According to the 1881 survey diagram of Paling, a cave exists at the farm's south-eastern corner, and this must be investigated (de Jong 2010:35).

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.

It is not known whether there are any Early or Late Iron Age sites are present in the area. However, some evidence exist that Tswana (LIA) settlement once reached as far as Postmasburg, but drier conditions and Korana expansion forced them towards Kuruman and Taung before 1800 (Mitchell 2002: 349). The ancient specularite workings at Blinkklipkop (Tsantsabane) and Doornfontein might also have an Iron Age connection, as evidence seems to point to some of the mining being done with metal tools (Mitchell 2002: 359).

No Iron Age sites, features or objects were found during the survey.

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 first Europeans to move through this area were the groups of Truter & Somerville in 1801, followed by Lichtenstein (1805), Burchell (1811) and Campbell (1813). The farm portion where the survey was undertaken was surveyed in 1881 (**see Chief Surveyor General Diagram – provided by Cultmatrix**). Modern mining in the area started during the late 1930's/40's, stopping sometime in the 1980's.

A number of sites dating to the historical period, including a grave site, possible old farmstead site and sites related to the recent mining history of the area, were recorded during the assessment.

7.4 Discussion of sites identified during the survey

Site 1

This site is represented by a single Middle Stone Age (MSA) stone tool, on chert. Local pockets of chert do occur in the area (Pers.comm: Avinash Bisnath – 2010-05-120.

GPS Location: S 28.15759 E 23.03746.

Significance of site: Low
Mitigation: None

Site 2

This is another Stone Age site represented by a single (MSA/LSA) stone tool.

GPS Location: S 28.15959 E 23.03699.

Significance of site: Low
Mitigation: None

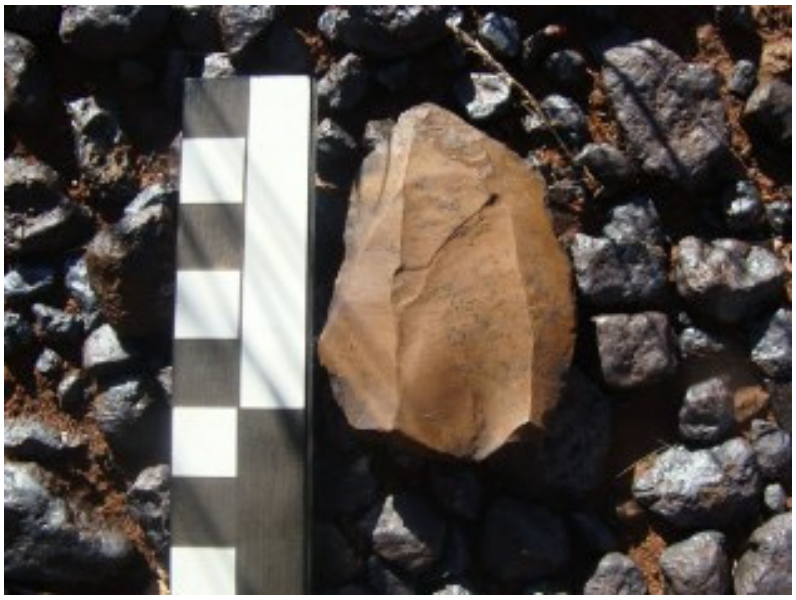

Figure 4: Stone tool – Site 1.

Figure 5: Stone tool – Site 2.

Site 3 – Historical graves

This is possibly the most significant site in the area, and will be impacted on by the mining development. The grave site, containing approximately 8 historical graves (older than 100 years of age) is situated close to old mining pits, and is fenced-in with a stone and wire fence. The site is densely overgrown, and there might be more graves that could not be seen during the assessment. Extensive clearing of the site might reveal more graves.

The graves belong to the Voges (1) and Van der Merwe (3) families, with the rest unidentified, but probably related to the same family or families. Four has headstones with legible inscription, on slate. The oldest date of death is 1894, with the most recent 1903.

According to a local farmer (Pers.comm.: Jan Muller 2010-05-12) they are aware of these graves, and he indicated that the farmstead site related to these graves are located close to a spring on the farm, not far from the graves (**See Site 7**). **It is recommended that the site be mitigated before mining operations start. This will entail exhuming and relocation of the graves, following all due processes necessary related to graves**.

GPS Location: S 28.17309 E 23.01987.

Significance of site: High
Mitigation: Exhume and relocate. SAHRA Permit. Clean, document in detail, archival and other research

Figure 6: Grave site – Site 3.

Figure 7: Voges grave – date of death 1894.

Figure 8: One of the Van der Merwe graves on the site. Date of death 1903.

Site 4

This site is represented by a refuse midden (ash heap), possibly related to the 20th mining activities in the area. Glass, porcelain and other material is scattered around, with some pieces possibly dating to earlier late 19th century times. The site is situated not far from the grave site.

GPS Location: S 28.17405 E 23.01506.
Significance of site: Low
Mitigation: None

Figure 9: Late 19th to mid 20th century material from Site 4

Site 5

Site 5 is a mining related structure. It is stone packed (dry walling), situated on a platform overlooking one of the many open mining pits in the area. It is possibly a "blasting" assembly point, although this could not be confirmed as yet. Similar structures were also observed close to open pits in other areas on the farm.

GPS Location: S 28.19634 E 23. 01569.

Significance of site: Low
Mitigation: None

Figure 10: Site 5 mining structure.

Site 6

This is another Stone Age site, located in a drainage line, situated outside the formal mining area. It contains a fairly large number of both MSA and LSA stone tools and flakes, and could represent a manufacturing site. The site is therefore significant, and although it might not be impacted on by the mining at this stage, mitigation should be considered in the event that mining does encroach onto the site in future.

GPS Location: S 28.19076 E 23.00787.

Significance of site: Medium to High
Mitigation: If needed, detailed mapping and drawing and surface sampling. SAHRA Permit

Figure 11: Some of the MSA/LSA stone flakes from Site 6.

Site 7

This site is located close to a spring, indicated to the team as the possible area where the farmstead was located, related to the graves noted at Site 3. Although no remains of the farmstead were found, a possible refuse midden (ash heap) area was identified, containing glass and porcelain dating to the late 19th to early 20th century. This material relates back to the graves, which date to the same time period. It is therefore possible that the homestead might still be identified in the area. Dense vegetation in the area made visibility and access difficult, and if cleared ruins of the farmstead could be located. Because of its possible relationship with the historical grave site, this site is deemed as significant and some mitigation measures are recommended.

GPS Location: S 28.17330 E 23.02354.

Significance of site: Medium to High
Mitigation: Cleaning area, detailed assessment of area. Excavating midden and other finds. SAHRA Permit

Figure 12: Late 19th century material from Site 7.

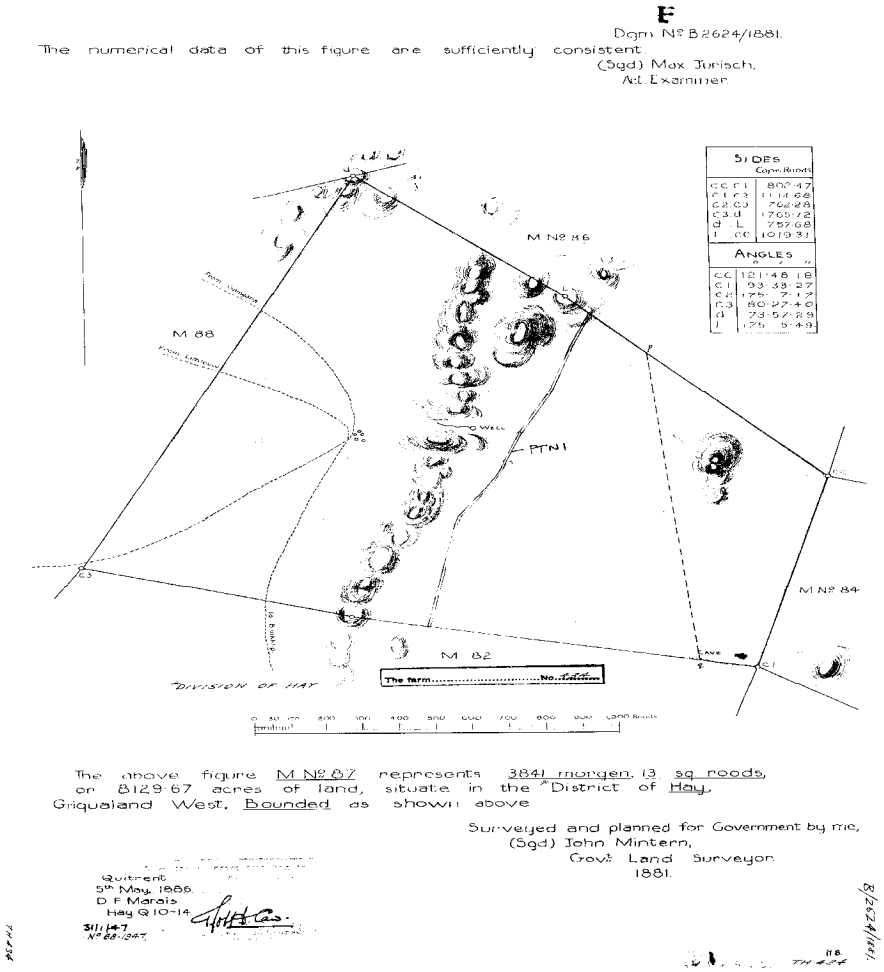

Figure 13: 1881 diagram of the area (Chief Surveyor General).

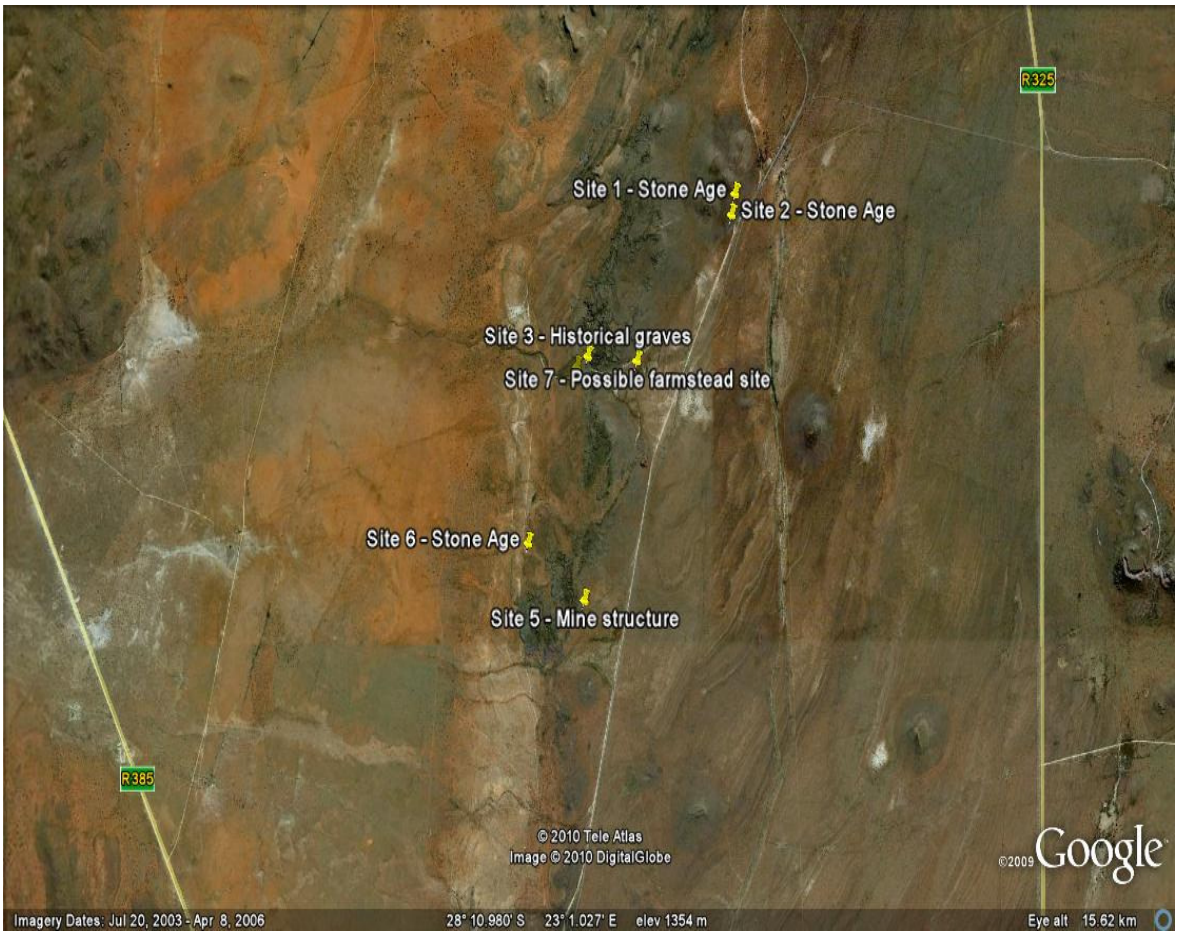

Figure 14: Distribution of sites found during assessment.

8. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it can be stated that the Archaeological Impact Assessment (AIA), as part of the larger HIA, of the area was conducted successfully. Seven sites, dating from the Stone Age (MSA/LSA) and the more recent historical period, was identified. Dense vegetation made archaeological visibility difficult, and more sites might be present. This includes unmarked and low stone packed graves. Two sites, namely Site 3 (historical graves) and Site 7 (possible farmstead related to Site 3) is deemed as of medium to high significance and because it will be impacted on negatively by the development, a number of mitigation measures will have to be implemented before the mining activities can continue. The following mitigation measures are recommended:

1. **Site 3 (Historical graves): Exhumation and relocation of graves. This will include the cleaning of the area to ensure detailed documentation of the graves, background archival research on the history of the graves, mapping the site, social consultation to try and identify possible descendants, and the physical exhumation and relocation. For this an undertaker, in conjunction with the archaeologists, will have to be employed and relevant permits has to be obtained**

2. **Site 7 (possible historical farmstead site related to the graves): Cleaning the area and detailed assessment of the area. This will aim at locating the possible farmstead ruins. Mapping the site and possible archaeological excavations to obtain cultural material for interpretation and dating purposes. A permit from SAHRA will have to be obtained.**

3. **Site 6 MSA/LSA open-air site: The site should be sampled through mapping and recording of Stone Age material, as well as surface collection of representative material. A SAHRA permit will be required. It is also recommended that, during this work the area be surveyed for the existence of remaining underground specularite mining evidence and that these sites be recorded as well. The cave indicated on the 1881 diagram of the farm should also be located, although currently it is outside the mining area.**

From a Cultural Heritage point of view there would be no objection to the development should the mitigation measures be implemented.

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. Because of the dense grass cover, visibility was difficult. Any features, objects or sites could therefore have been missed. This includes low, stone-packed, graves.

9. REFERENCES

Distribution of sites: Images © Google Earth

Topographic Locality map and 1881 Diagram (Chief Surveyor general) plan provided Cultmatrix Heritage Consultants

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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 coincidal 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.