Archaetnos Culture & Cultural
Resource Consultants
BK 98 09854/23

A REPORT ON A HERITAGE IMPACT ASSESSMENT FOR A PROPOSED OPENCAST COAL MINE ON THE FARMS JOUBERTSVLEI 260 IT AND MEPPEL 264 IT, CLOSE TO ERMELO, MPUMALANGA PROVINCE

For:

Geovicon

REPORT: **AE01232V**

By:

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

June 2012

Archaetnos
P.O. Box 55
GROENKLOOF
0027
Tel: **083 2916104**
Fax: 086 520 4173
E-mail: antonv@archaetnos.co.za

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.

The South African Heritage Resources Agency (SAHRA) or one of its subsidiary bodies needs to comment on this report and clients are advised not to proceed with any action before receiving these. It is the responsibility of the client to submit this report to the relevant heritage authority.

SUMMARY

Archaetnos cc was appointed by Geovicon to conduct a heritage impact assessment for a proposed opencast coal mine on certain portions of the farm Joubertsvlei 260 IT and Meppel 264 IT. This is close to Ermelo in the Mpumalanga Province.

The fieldwork undertaken revealed eighteen sites of cultural heritage significance. These are discussed in the report.

Appropriate mitigation measures are proposed. The development may continue only after implementation of these.

The developer also needs to take note that all archaeological and historical sites may not have been identified due to the density of vegetation in certain areas. It also is possible that subterranean archaeological sites may be found later on. Should such sites be identified, it needs to be dealt with by an archaeologist.

CONTENTS

Page

1. INTRODUCTION

Archaetnos cc was appointed by Geovicon to conduct a heritage impact assessment for a proposed opencast coal mine on certain portions of the farm Joubertsvlei 260 IT and Meppel 264 IT. This is close to Ermelo in the Mpumalanga Province.

The client indicated the area where the proposed development is to take place, and the survey was confined to this area.

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. 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. Recommend suitable mitigation measures to minimize possible negative impacts on the cultural resources by the proposed development.

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 (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 particular case the vegetation cover in certain areas was very dense making archaeological visibility difficult.

7. Due to the subterranean presence of archaeological sites it is possible that such sites may only be identifies later on. In such a case an archaeologist should be contacted immediately to assess these.

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 or 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 palaeontological importance
g. Graves and burial grounds
h. Sites of significance relating to the history of slavery
i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment 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 000m^2 or involve three or more existing erven or subdivisions thereof
d. Re-zoning of a site exceeding 10 000 m^2
e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

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

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

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

Archaeology, palaeontology and meteorites

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

a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or

d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

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

Human remains

Graves and burial grounds are divided into the following:

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

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

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

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. METHODOLOGY

5.1 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.

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 significance in the area of proposed development. 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. The survey was undertaken by a physical survey via off-road vehicle and on foot.

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.

5.5 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.

6. DESCRIPTION OF THE AREA

The area that was surveyed is situated more or less 15 km to the north-east of the town of Ermelo. This is in the Mpumalanga Province (Figure 1-3).

The environment of the area is mostly disturbed by agricultural activities. This includes maize and soya bean fields. Undisturbed areas are used for grazing. In these areas the vegetation cover is reasonably high making archaeological visibility difficult. The vegetation consists of grassland with isolated trees here and there.

Figure 1 Location of the town of Ermelo and the surveyed site in the Mpumalanga Province.

The topography of the area varies as the landscape consists of rolling hills. A wetland system is found in the south-east. On the southern boundary of the property another mine is already in operation (Figure 4-5).

A railway line and unpaved road cuts through the area to the north. Some homesteads of farm workers are found in the north-west.

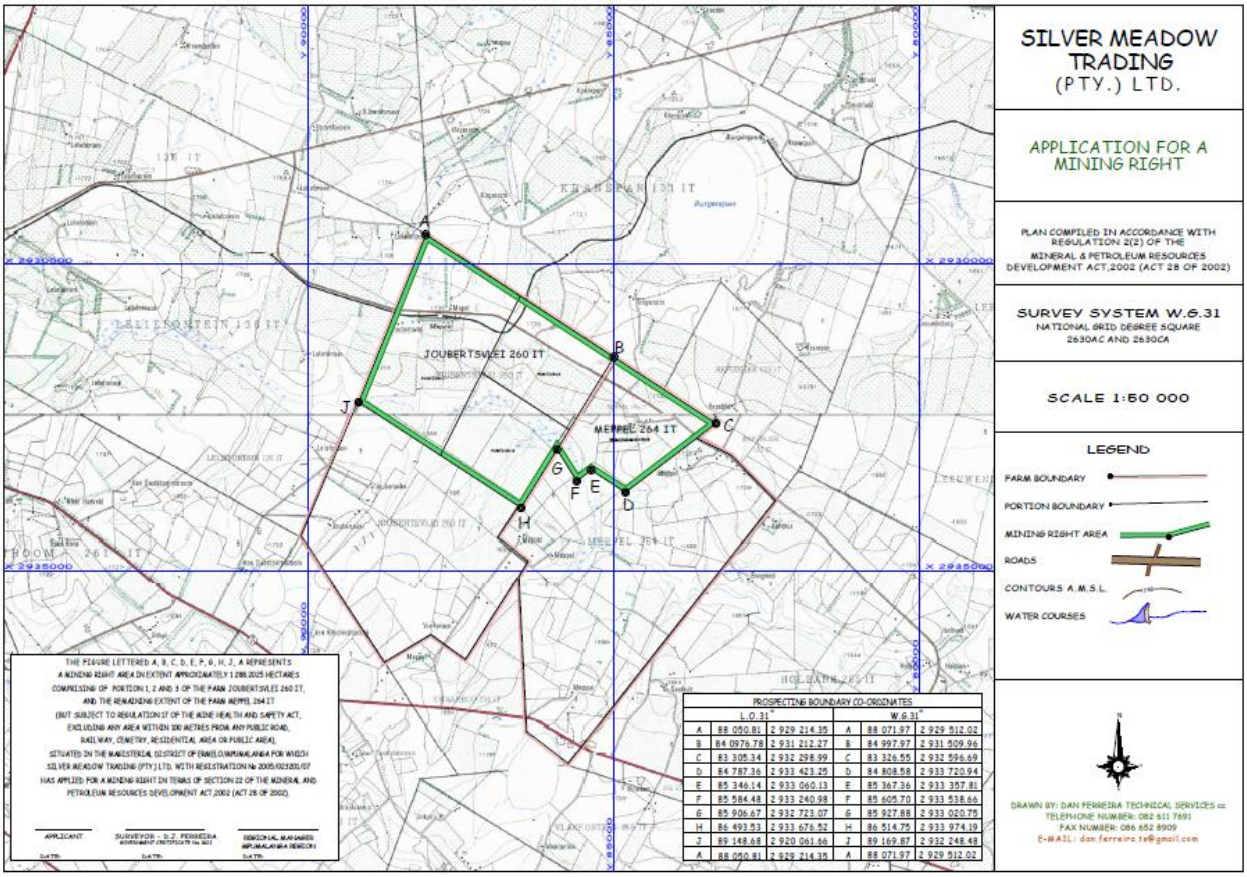

Figure 2 Location of the site indicating the mining right area.

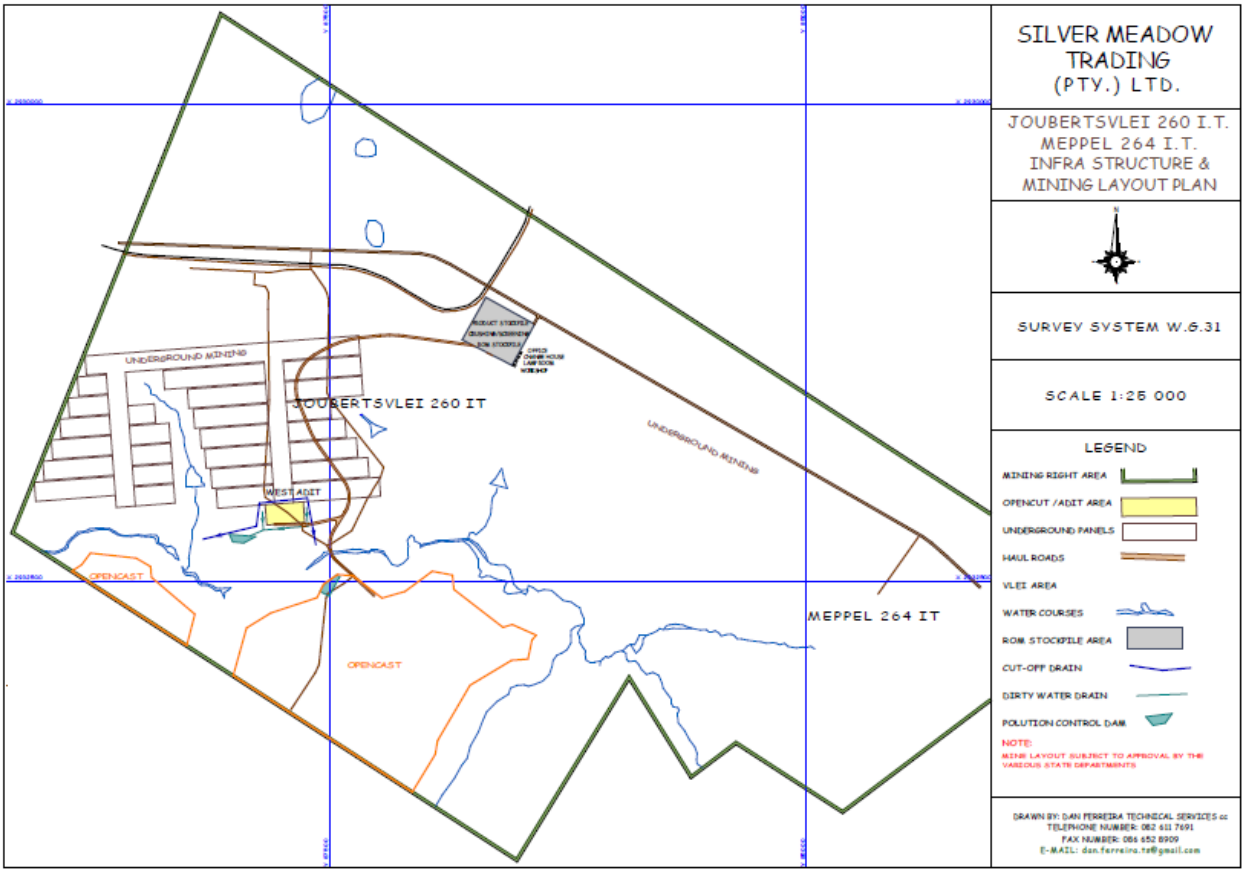

Figure 3 Map indicating the proposed infrastructure on the mine.

Figure 4 General view of the surveyed area showing rolling hills, ploughed fields, isolated trees and grassland.

Figure 5 Another view of the surveyed area showing a mine to the south.

7. HISTORICAL CONTEXT

During the survey eighteen sites of cultural heritage significance was located in the area to be developed. However, there always is a possibility that more sites may become known later and that those need to be dealt with in accordance with the legislation discussed above. In order to enable the reader to better understand archaeological and cultural features, it is necessary to give a background regarding the different phases of human history.

Delius (2006: 86) indicates that little research has been done in the southeastern portion of Mpumalanga. Therefore other sources including data bases and text books become more important in providing information, and these have been relied on for this report.

7.1 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.

No Stone Age sites have been identified by scientists previously in the study area. From a map in Inskeep (1978: 67) it seems as if Early Stone Age material was identified in the south-east of Mpumalanga, but the scale of the map makes it impossible to determine exactly where these sites are situated. Also no Early Stone Age sites in the investigated area are indicated in a fairly recent publication (Mitchell 2002: 43). This is confirmed by Esterhuysen & Smith (2006: 8) who also constitutes that very little evidence of the Early Stone Age was found in Mpumalanga. They also do not mention any specific sites in the area under investigation. It can therefore be stated that no important site dating to the Early Stone Age has been recorded in the study area.

A map showing Late Stone Age sites (Inskeep 1978:85) also indicate that no such sites were found in the south-eastern part of Mpumalanga. The same goes for a map in Phillipson (1985:77) which indicate no Middle or Late Stone Age occurrences here. Similarly no Middle or Late Stone Age sites in the study area are shown on maps by Mitchell (2002: 61, 73, 110, 127, 138, 162). Again Esterhuysen & Smith (2006: 9-10) agrees and they state that very little evidence of the Middle and Late Stone Age was found in Mpumalanga. This however only indicates the lack of research in the area.

The above mentioned information is confirmed in a historical atlas which also does not show any such sites in the broader geographical area (see Bergh 1999). This includes rock art sites which usually are associated with the Late Stone Age. This is confirmed by Mitchell (2002: 193, 228) and Smith & Zubieta (2006: 36). Last mentioned publishes a list of known rock paintings and engravings in Mpumalanga, which does not include any in the investigated area.

The database of the South African Heritage Resources Agency (SAHRA) and the Archaeological Data Recording Centre (ADRC) at the National Cultural History Museum (NCHM) also does not list any Stone Age sites in this area. Apart from the lack of research it should be mentioned that the lack of heritage surveys done in the area, may be contributing factors for this.

From the above mentioned it is difficult to state that Stone Age people did utilize and settled in the area. However, it is highly unlikely that they would not have been present here. The close vicinity of water sources and ample grazing would have made it a prime spot for hunting and obtaining water during the past. Therefore one may assume that Stone Age people probably would have used the area.

7.1 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.

No Early or Middle Iron Age sites have been identified in the area of study (Mitchell 2006: 260; Bergh, 1999: 6-7; Phillipson, 1984: 174; Inskeep, 1978: 120). It however needs to be said that very few Early Iron Age sites have been identified throughout South Africa. Again this points to a lack of research. Proper surveys and research may therefore provide evidence of this period in time in the wider geographical area, especially since Early Iron Age sites are known to both the north and south hereof, in Lydenburg and Kwazulu-Natal. No sites from the Early, Middle or Late Iron Age are included on the SAHRA or NCHM database.

However the historical atlas does show that a large number of Late Iron Ages sites are found in the south-east of Mpumalanga. Late Iron Age sites are the easiest of all archaeological sites to identify as it usually contains a variety of stone walls and are situated against the slopes or on top of hills and mountains. In a band stretching from Bethal to Ermelo, 585 sites have been identified. A further 220 sites were identified to the north-west of Ermelo (Bergh 1999: 7). Unfortunately no specific sites are mentioned.

At none of these sites signs of archaeo-metallurgy were found (Bergh 1999: 8-9). Inskeep (1978: 135) does however indicate that iron ore was mined by prehistoric people in the broader geographical area. Again his information is not location specific.

Other scholars (Inskeep 1978: 137; Huffman 2007: 32) also indicate stone walled settlements in this area, without giving any particulars of the locations or mentioning any names of sites. According to Esterhuysen & Smith (2006: 11) Late Iron Age people moved into the Highveld areas of Mpumalanga by the 12th century. Huffman (2007: 301) indicates that Iron Age people from the Maguga facies of the Kalundu tradition inhabited this area as early as 1100 A.D. He also does not mention specific sites.

During CA 1760 Swazi people settled at kwaMadlangampisi. This was the start of the Tshabalala dynasty (Hofmeyr & Smith 2009: ix). Even today the Swazi's are the most dominant group in the area.

The people that inhabited the southern parts of Mpumalanga before the 19th century were the Bakgatla, Barolong, Bantwane, Bakone, Bakopa and Southern Ndebele communities (Makhura 2006: 42). The Eastern-Sotho, in this case consisting of the BaPai, inhabited an area close to modern day Swaziland during the 17th century (Makhura 2006: 50). The sites mentioned probably are the remains of their settlements.

Again it should be emphasized that chances are good that more Iron Age material will be identified in this area, should more research and heritage surveys be done in future.

7.2 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.

None of the early trade routes in the interior of South Africa went through the area of study (Bergh 1999: 9). However it is possible that due to the little research in the area, this still has to be discovered. It also is possible that secondary routes did pass through the south-east of Mpumalanga.

At the beginning of the 19th century a Sotho group, the Phuthing, inhabited the western section of southern Mpumalanga. To the south-east the Swazi were present (Delius 2006: 83-86; Bergh 1999: 10). It was therefore mainly the Swazi who inhabited the south-eastern parts of Mpumalanga during this time (Makhura 2006: 55; Mitchell 2006: 371). In 1800 Dingiswayo fled to Hlubi close to Wakkerstroom. He died in 1818 and his empire was taken over and strengthened by Shaka (Hofmeyr & Smith 2009: ix).

During the Difaquane (1820-1837) the Ndebele of Mzilikazi moved through this landscape and some even settled here. As a result the Phuthing fled to the south. The Swazi now moved to the north and west, therefore inhabiting the area (Bergh 1999: 11; Bergh & Bergh 1984: 22). One would therefore expect remains of settlements of all three these groups, although the Ndebele of Mzilikazi usually didn't develop their own settlements but reused those of the people they conquered.

In 1836 the early traveler, Robert Scoon visited the area (Bergh 1999: 13**)**. White farmers only moved into the south-eastern Mpumalanga after 1853 when the government of the South African Republic (ZAR or Transvaal) traded the land from the Swazi. The town of Ermelo was established in 1880 and the Ermelo district was proclaimed in 1882 (Bergh 1999: 20-21).

Missionaries also came to this part of the country during the 19th century. The Wesleyan Missionaries established mission stations at Ermelo during this time (Bergh 1999: 57).

The broader geographical area also experienced some action during the Anglo-Boer War (1899-1902). During the British offensive, Lt-genl. R Buller moved through the area and occupied Volksrust on 12 June 1900. He then moved further to the north and reached Amersfoort on 7 August 1900. At this time Boer commandos were placed at Laingsnek and Amajuba, but Buller had them on the retreat. They moved through Volksrust and Amersfoort. There were various battles in this area. On 12 August 1900 the town of Ermelo was occupied by the British (Bergh 1999: 51).

It was included in the blockhouse lines. There were a line between Standerton and Ermelo, between Ermelo and Amsterdam as well as one between Ermelo and Carolina. The remains of some of these have survived and include a corrugated iron blockhouse in Ermelo (Van Vollenhoven & Van den Bos 1997: 77-92).

A further indication of the lack of research and heritage work in the south-east of Mpumalanga comes from the SAHRA list of declared heritage sites. The only declared provincial sites in the area are buildings and streetscapes in some of the towns.

Although not formally declared, many historical buildings are found in south-eastern Mpumalanga. This would be mostly sandstone buildings typical of the years approximately 1870-1920 as well as Victorian architecture from the 1890's to early in the twentieth century. Many of the latter were probably built during the Anglo- Boer War and are usually made of corrugated iron. However these are mostly to be found in the towns with only a few located on farms.

The last kind of heritage site to refer to is graves. All graves older than 60 years are regarded as being heritage graves. Those with an unknown date are also regarded as heritage graves. Graves of this age will be found in all the formal municipal cemeteries in the area. However, many informal cemeteries on farms and close to traditional homesteads are also present. It is impossible to predict where these may be located as they are placed randomly within communities. Some of these were indeed found within the surveyed area.

The historical features and sites se are mostly dominant in and around the historically white towns, but some will be found on remote areas on farms and in the mountains. As is the case with the prehistory of the area, proper research and heritage surveys in the area are needed to compile a more complete list.

8. DISCUSSION OF SITES IDENTIFIED DURING THE SURVEY

8.1 Site 1

The site consists of the farm house on the farm Joubertsvlei. It is a beautiful sandstone building dating to 1896 – the date can still be seen on the building (Figure 6-7). Unfortunately the house has been changed to a large extent

GPS: 26°29.116'S
30°07.235'E

The site has a **medium** cultural significance. It has a local significance and is therefore given a rating of Grade IIIB. It should therefore be included in the heritage register and may be mitigated. Mitigation, if the site needs to be demolished, will include the full documentation thereof.

Figure 6 The date of the building (1896) can still be seen on what used to be an outside wall.

Figure 7 View of the farm house on Joubertsvlei showing later additions.

8.2 Site 2

This is a grave yard consisting of two sections divided by some wattle trees. It is found close to some farm workers houses. The first section has at least three graves (Figure 8) and the second at least 18. One grave has a stone border while the rest are all stone packed. Some have no headstones and others have headstones made of stone. No legible information is available. The graves therefore have an unknown date of death and are therefore regarded as heritage graves.

GPS: 26°29.100'S
30°06.865'E

Figure 8 Some of the graves at site no. 2.

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only

an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are reasonably close to the planned infrastructure for the mine. Therefore option 2 is recommended.

8.3 Site 3

This is another grave yard. This one is situated close to farm workers houses and contains at least three graves (Figure 9). One grave is stone packed while the rest are all stone packed. Only one has a stone headstone, but no legible information. The graves therefore have an unknown date of death and are therefore regarded as heritage graves.

GPS: 26°29.087'S
30°06.809'E

Figure 9 One of the graves at site no. 3.

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are reasonably close to the planned infrastructure for the mine. Therefore option 2 is recommended.

8.4 Site 4

This is a grave yard consisting of at least twelve graves (Figure 10). The graves are either stone packed without any headstones or have a cement border and cement headstone. Only one grave has legible information. It shows a surname, Maseko, and a date of death of 1962. This grave therefore is younger than 60 years, but the others are unknown and are therefore regarded as heritage graves.

GPS: 26°29.732'S
30°06.792'E

Figure 10 One of the graves at site no. 3.

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are on the edge of the proposed opencast mining area. Therefore option 2 is recommended.

8.5 Site 5

This is another grave yard. This one contains at least eight graves (Figure 11). One grave has a cement border and headstone, while the others are all stone packed and without headstones. One surname was identified being Madalayilakazi. Only one date of death could be determined, being 1913. This grave is therefore older than 60 years and is therefore a heritage grave. The others all have an unknown date of death and are therefore also regarded as heritage graves.

Figure 11 Some of the graves at site no. 5.

GPS: 26°29.720’S
30°06.410’E

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are reasonably close to the planned underground mining area. However underground mining operations can cave in and therefore option 2 is recommended.

8.6 Site 6

This is yet another grave yard consisting of at least three graves (Figure 12). The grass here is very long and therefore nothing can be seen on the photograph. The graves are stone packed. No legible information is available. The graves therefore have an unknown date of death and are therefore regarded as heritage graves.

GPS: 26°29.596’S
30°06.696’E

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are reasonably close to the planned infrastructure for the mine. Therefore option 2 is recommended.

Figure 12 Area where graves were identified, named site no. 6.

8.7 Site 7

This is a grave yard consisting of at least four graves. These again are in long grass within a maize field and one cannot see anything on the photograph (Figure 13). The graves are stone packed. No legible information is available. The graves therefore have an unknown date of death and are therefore regarded as heritage graves.

GPS: 26°29.786'S
30°06.983'E

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are on the edge of the planned underground mining area. Therefore option 2 is recommended.

Figure 13 Area where graves were found and marked site no. 7.

8.8 Site 8

This again is a grave yard and this one contains at least three graves (Figure 14). The graves are only indicated by single stones without any headstones. The graves therefore have an unknown date of death and are therefore regarded as heritage graves.

GPS: 26°30.147'S
30°07.771'E

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are inside of the proposed opencast mining area. Therefore option 2 is recommended.

Figure 14 Single stones indicating graves at site no. 8.

8.9 Site 9

This is a grave yard consisting of at least five graves (Figure 15). These are all stone packed and have no headstones. The graves therefore have an unknown date of death and are therefore regarded as heritage graves.

GPS: 26°30.252’S
30°07.928’E

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are reasonably close to the planned infrastructure for the mine. Therefore option 2 is recommended.

Figure 15 One of the graves at site no. 9.

8.10 Site 10

This is another grave yard consisting of at least three graves (Figure 16). They are all stone packed and only one has a headstone made of stone. No legible information is available. The graves therefore have an unknown date of death and are therefore regarded as heritage graves.

GPS: 26°29.924’S
30°08.162’E

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are outside of the area of direct impact, but there always is a secondary impact. Therefore option 1 is recommended.

Figure 16 Some of the graves at site no. 10.

8.11 Site 11

This is a formal grave yard which has been fenced in properly. It contains at least eight graves (Figure 17). The graves all either have cement or marble borders and headstones. Surnames identified are Scheepers and Joubert. The dates of death vary between 1901 and 1945. The graves therefore are all older than 60 years and are therefore heritage graves.

GPS: 26°30.050'S
30°09.108'E

Figure 17 Some of the graves at site no. 11.

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are outside of the area of direct impact, but there always is a secondary impact. Therefore option 1 is recommended.

8.12 Site 12

The site consists of the farm yard on the farm Meppel. However only the old wagon house has any heritage significance. It is a beautiful sandstone building most likely dating to the end of the 19th Century (Figure 18).

GPS: 26°30.085'S
30°08.162'E

The site has a **high** cultural significance. It has a local significance and is therefore given a rating of Grade IIIB. It should therefore be included in the heritage register and may be mitigated. Mitigation, if the site needs to be demolished, will include the full documentation thereof. One should however try to avoid demolishing it. It is outside of the area of direct impact and therefore it would be possible to maintain and preserve it.

Figure 18 Wagon house (site 12) on the farm Meppel.

8.13 Site 13

This is a grave yard again consisting of at least three graves (Figure 19). These are stone packed and have no headstones. The graves therefore have an unknown date of death and are therefore regarded as heritage graves.

GPS: 26°30.130’S
30°09.284’E

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case it seems as if the graves are outside of the area of direct impact. However there always is an indirect impact and therefore option 1 is recommended.

Figure 19 One of the graves at site no. 13.

8.14 Site 14

This is a grave yard consisting of at least two graves. They are both stone packed and have no headstones (Figure 20). The graves therefore have an unknown date of death and are regarded as heritage graves.

GPS: 26°30.142'S
30°09.217'E

Figure 20 Some of the graves at site no. 14.

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case the graves seem to be outside of the area of direct impact, but there always is an indirect impact. Therefore option 1 is recommended.

8.15 Site 15

This is a grave yard consisting of at least four graves. They are all stone packed and have no headstones (Figure 21). The graves therefore have an unknown date of death and are regarded as heritage graves.

GPS: 26°29.901'S
30°09.505'E

Figure 21 One can vaguely see the stones from one of the graves at site no. 15.

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case the graves seem to be outside of the area of direct impact, but there always is an indirect impact. Therefore option 1 is recommended.

8.16 Site 16

This is a grave yard consisting of at least seventeen graves. They are mostly stone packed and some have stone headstones whilst others have none (Figure 22). One has a granite headstone. On this headstone the surname Mathebula is visible, but there is no date of death. As the graves have an unknown date of death, they are regarded as heritage graves.

GPS: 26°29.388'S
30°08.433'E

Figure 22 One of the graves at site no. 16.

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no

direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case the graves seem to be outside of the area of direct impact, but there always is an indirect impact. Therefore option 1 is recommended.

8.17 Site 17

This is yet another grave yard consisting of at least five graves. Four of them are stone packed and one has a cement dressing. None have headstones (Figure 23). The graves therefore have an unknown date of death and are regarded as heritage graves.

GPS: 26°29.288'S
30°07.972'E

Figure 23 The grave with the cement dressing at site no. 17.

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case the graves seem to be either inside or very close to the proposed stockpile area. It therefore is within the area of direct impact. Therefore option 2 is recommended.

8.18 Site 18

This is a grave yard consisting of at least four graves. One of these is stone packed and the others only show one or two stones. No headstones were identified (Figure 24). The graves therefore have an unknown date of death and are regarded as heritage graves.

GPS: 26°29.281'S
30°07.886'E

Figure 24 The stone packed grave at site no. 18.

Graves always are regarded as having a **high** cultural significance. These graves are of a local significance and are therefore given a rating of Grade IIIB. It may therefore be mitigated if needed.

There are two options when dealing with graves. The first would be to fence it in and write a management plan for the preservation thereof. This option will come into play if there is no direct impact on the graves. It should be kept in mind that there always is a secondary impact on graves since families may not have access thereto once a mine comes into operation.

The second option is to have the graves exhumed and the bodies reburied. This option is preferred when graves cannot be avoided by the development.

Before exhumation can be done a process of social consultation is needed in order to find the associated families and obtain permission from them. For graves younger than 60 years only an undertaker is involved in the process, but for those older than 60 years or with an unknown date of death, an undertaker and archaeologist should be involved.

In this case the graves seem to be inside of the area of direct impact, being the proposed stockpile area. Therefore there will be a direct impact and option 2 is recommended.

9. CONCLUSIONS AND RECOMMENDATIONS

It is concluded that the assessment of the area was conducted successfully. In the surveyed area 18 sites (Figure 25) of cultural heritage significance have been found. A farm worker, Timothy Bukhele, who has worked on both farms for 22 years, indicated that he does not know of any other grave sites.

The final recommendations are as follows:

- It needs to be stated that although maps were provided it sometimes is difficult to determine exactly whether a site will be impacted on directly or not. The client should therefore verify the impacts indicated in this report.

- For sites number 1 and 12 (farm buildings) it is recommended that these may be demolished. This should only be the case if it is in the way of the mining or associated infrastructure. Should it be demolished it may only be done after full documentation of the sites and on obtaining the necessary permit from the provincial office of SAHRA.

- For sites number 10, 11, 13, 14, 15 and 16 (graves) option 1 is recommended. This is due to the fact that these sites seem to be outside of the area of direct impact. However there always is a secondary impact.

- Option 1 means that the sites should be fenced in and a management plan should be written by a heritage expert for the preservation and maintenance of these.

- It seems as if there will be a direct impact on sites number 2 - 9, 17 and 18 (graves). Therefore option 2 is recommended for these.

- Option 2 entails the exhumation of the graves and the reburial of the human remains. Before this may happen the necessary advertising, possible social consultation and permitting applications should be implemented. For unknown graves and those with a date older than 60 years an archaeologist and undertaker needs to handle the process, but for those younger than 60 years only an undertaker is needed.

- It should be remembered that due to the natural factors indicated in the report, it is possible that more cultural sites may be present. Also the subterranean presence of archaeological and/or historical sites, features or artifacts are always a distinct possibility. Care should also be taken when development work commences that if any more sites or artifacts are uncovered, a qualified archaeologist be called in to investigate.

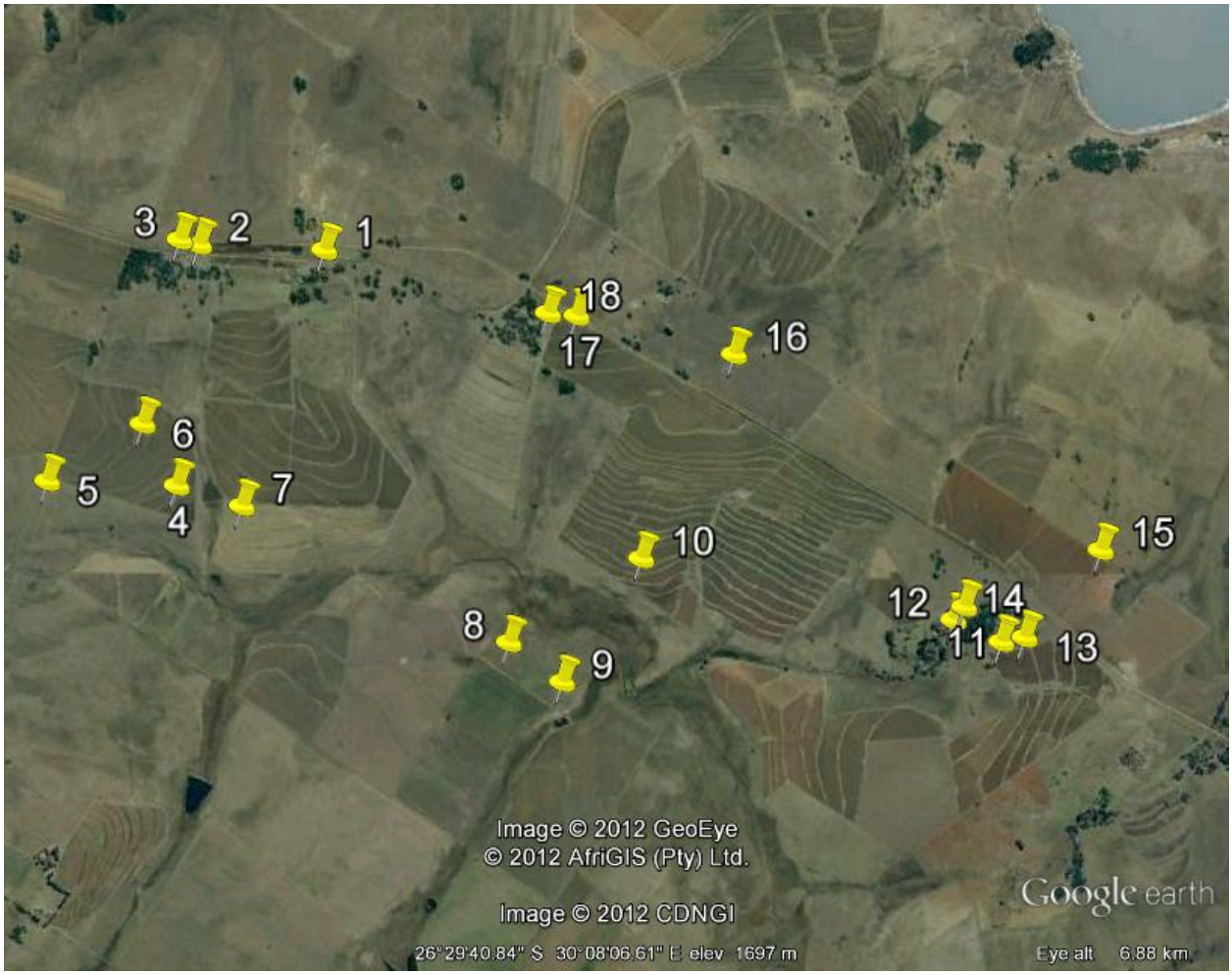

Figure 27 Google map indicating the location of sites found during the survey.

10. REFERENCES

Bergh, J.S. (ed.). 1999. **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.

Bergh J.S. & Bergh, A.P. 1984. **Stamme en Ryke**. Cape Town: Don Nelson.
Bukhele, Mr. T. 2012.06.06, Farm worker.
Coertze, P.J. & Coertze, R.D. 1996. **Verklarende vakwoordeboek vir Antropologie en Argeologie.** Pretoria: R.D. Coertze.
Delius, P. (ed.). 2006. **Mpumalanga history and heritage. Reclaiming the past, defining the future**. Scottsville: University of Kwazulu Natal Press.
Esterhuysen, A. & Smith, J. 2006. The archaeology of Mpumalanga. Delius, P. (ed.). **Mpumalanga history and heritage. Reclaiming the past, defining the future**. Scottsville: University of Kwazulu Natal Press.
Hofmeyr, H. & Smith, K. 2009. **Wakkerstroom jewel of Mpumalanga**. Centurion: Mediakor.
Huffman, T.N. 2007. **Handbook to the Iron Age: The Archaeology of Pre-Colonial Farming Societies in Southern Africa.** Scottsville: University of KwaZulu-Natal Press.
Inskeep, R.R. 1978. **The peopling of southern Africa.** Cape Town: David Phillip.
Knudson, S.J. 1978. **Culture in retrospect.** Chicago: Rand McNally College Publishing Company.
Korsman, S.A. & Meyer, A. 1999. Die Steentydperk en rotskuns. Bergh, J.S. (red.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.
Makhura, T. 2006. The pre-colonial history of Mpumalanga society until the 19th century. Delius, P. (ed.). **Mpumalanga history and heritage. Reclaiming the past, defining the future**. Scottsville: University of Kwazulu Natal Press.
Mitchell, P. 2002. **The Archaeology of Southern Africa**. Cambridge: Cambridge University Press.
NCHM, Ditsong Museum of Culture, ADRC database.
Phillipson, D.W. 1985. **African Archaeology**. Cambridge: Cambridge University Press.
Republic of South Africa. 1980. **Ordinance on Excavations** (Ordinance no. 12 of 1980). The Government Printer: Pretoria.
Republic of South Africa. 1983. **Human Tissue Act** (Act 65 of 1983). The Government Printer: Pretoria.
Republic of South Africa. 1999. **National Heritage Resources Act** (No 25 of 1999). Pretoria: the Government Printer.
Republic of South Africa. 1998. **National Environmental Management Act** (no 107 of 1998). Pretoria: The Government Printer.
SAHRA database.
Smith, B.W. & Zubieta, L.F. 2006. The rock art of Mpumalanga. Delius, P. (ed.). **Mpumalanga history and heritage. Reclaiming the past, defining the future**. Scottsville: University of Kwazulu Natal Press.
Van der Ryst, M.M. & Meyer, A. 1999. Die Ystertydperk. Bergh, J.S. (red.). **Geskiedenisatlas van Suid-Afrika. Die vier noordelike provinsies.** Pretoria: J.L. van Schaik.
Van Vollenhoven, A.C. & Van Den Bos, J.W. 1997. **'n Kultuurhulpbronstudie van die Britse blokhuisstelsel van die Tweede Anglo-Boereoorlog (1899-1902) in die voormalige Transvaal (Zuid-Afrikaansche Republiek)**. Pretoria: National Cultural History Museum.

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.