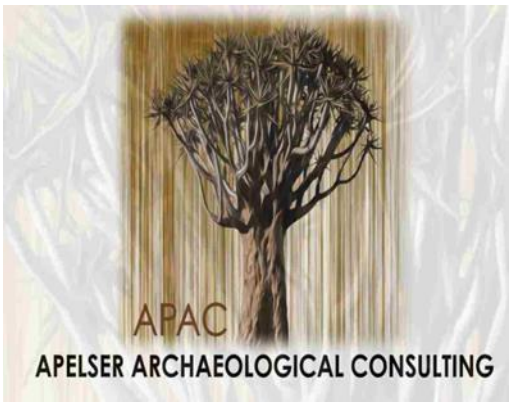

Comprehensive and Professional Solutions for all Heritage Related Matters

CK 2006/014630/23 **VAT NO.: 4360226270**

PHASE 1 HIA REPORT FOR THE KHUTALA 5 SEAM MINING PROJECT ON THE FARMS COLOGNE 34 IS, SCHOONGEZICHT 218 IR, LEEUWFONTEIN 219 IR, ZONDAGSVLEI 9 IS AND KLEINZUIKERBOSCHPLAAT 5 IS BETWEEN OGIES AND eMALAHLENI IN MPUMALANGA

For:

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REPORT: **APAC020/93**

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October 2020
Amended Version: May 2021

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SUMMARY

South32 SA Coal Holdings (Pty) Limited: South Africa Energy Coal (Hereafter referred as 'SAEC') intends to undertake environmental regulatory process which includes an Environmental Authorisation and Water Use Licence application to mine the 5 Seam coal at Khutala Colliery. The proposed applications will be undertaken to as promulgated under the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended (NEMA) and applicable regulations and in terms of the National Water Act, Act 36 of 1998 as amended (NWA).

SAEC is the owner and operator of Khutala Colliery which falls under a cost-plus arrangement with Eskom Holdings SOC Limited (Eskom). Khutala Colliery is predominately an underground operation, and It is located in the eMalahleni and Victor Khanye Local Municipalities, within the Nkangala District Municipality, in the Mpumalanga Province of South Africa.

APelser Archaeological Consulting (APAC) was appointed by Licebo Environmental and Mining (Pty) Ltd to conduct a Phase 1 HIA for the Khutala 5 Seam Mining Project. The development and study area is located between the towns of Ogies and eMalahleni in Mpumalanga.

Background research indicates that there are some cultural heritage sites and features in the larger geographical area within which the study area falls. A number of cultural heritage (archaeological and/or historical) sites, features and material resources were identified in the study area during the field assessment. One of these sites will be directly impacted by the proposed future mining activities. This report discusses the results of both the background research and physical assessment and provides recommendations on the required mitigation measures at the end.

From a Cultural Heritage perspective, it is recommended that the proposed development should be allowed to continue once the mitigation measures provided at the end has been implemented.

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1. INTRODUCTION

South32 SA Coal Holdings (Pty) Limited: South Africa Energy Coal (Hereafter referred as 'SAEC') intends to undertake environmental regulatory process which includes an Environmental Authorisation and Water Use Licence application to mine the 5 Seam coal at Khutala Colliery. The proposed applications will be undertaken to as promulgated under the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended (NEMA) and applicable regulations and in terms of the National Water Act, Act 36 of 1998 as amended (NWA).

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Khutala is a large, multi-section underground and opencast mine, predominantly supplying the domestic market. SAEC supplies domestic coal, specifically coal from the 4 and 2 Seam from Khutala to Eskom's Kendal power station under the long-term Kendal coal supply agreement (CSA). Khutala was commissioned as a single product mine to supply Kendal, with first coal delivered in 1986. Currently, Khutala supplies ~13.3 Mtpa of coal to Kendal and is critical to the long-term sustainability of the power station.

APelser Archaeological Consulting (APAC) was appointed by Licebo Environmental and Mining (Pty) Ltd to conduct a Phase 1 HIA for the proposed 5 Seam Mining Project as part of the Environmental Authorisation approval process to identify key aspects that may have significant Heritage and cultural resources during the various project phases. The proposed 5 Seam Mining Project activities will be undertaken within the following farm portions: Portion 3 of the Farm Cologne 34 IS, Portion 35 of the Farm Leeuwfontein 219 IR, Portion 40 of the Farm Schoongezicht 218 IR, and Remaining Extent of Portion 2, Portion 3, 6, 16, 17 and 18 of the Farm Zondagsvlei 9 IS and Remaining Extent of the Farm Kleinzuikerboschplaat 5 IS in the eMalahleni and Victor Khanye Local Municipalities, within the Nkangala District Municipality, in the Mpumalanga Province of South Africa.

Activities to be undertaken will involve the development and mining of the 5 Seam underground workings, construction of ventilation shaft, construction of the transfer chute from the existing conveyor belt, construction of a link road between Khutala Colliery and Klipspruit

South (KPS/KHU Link Road), a coal stockpile area and associated water management infrastructure. The mine will use most of the existing infrastructure to support the proposed 5 Seam Mining Project.

Heritage background research indicates that there are some cultural heritage sites and features in the larger geographical area within which the study area falls. A number of cultural heritage (archaeological and/or historical) sites, features and material resources were identified in the study area during the field assessment. One of these sites will be directly impacted by the proposed future mining activities.

The client indicated the location and boundaries of the study area and the assessment concentrated on this portion. A representative of the client accompanied the Heritage Specialist during the field work.

2. TERMS OF REFERENCE

The Terms of Reference for the study was to:

1. Identify all objects, sites, occurrences, and structures of an archaeological or historical nature (cultural heritage sites) located on the portion of land that will be impacted upon by the proposed development;

2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;

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. 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).

3.1. 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. **Graveyards and graves older than 60 years**;
h. Meteorites and fossils;
i. Objects, structures, and sites of scientific or technological value.

The National Estate includes the following:

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

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

a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length;
b. The construction of a bridge or similar structure exceeding 50m in length;
c. Any development or other activity that will change the character of a site and exceed 5 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; and
f. Human remains.

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

a. Destroy, damage, alter, exhume or remove from its original position 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 to) 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**).

3.2. The National Environmental Management Act

This act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

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

4. METHODOLOGY

4.1. Survey of literature

A survey of available literature was undertaken in order to place the development area in an archaeological and historical context. The sources utilized in this regard are indicated in the bibliography.

4.2. Field survey

The field assessment section of the study was conducted according to generally accepted HIA practices and aimed at locating all possible objects, sites, and features of heritage significance in the area of the proposed development. The location/position of all sites, features and objects is determined by means of a Global Positioning System (GPS) where possible, while detail photographs are also taken where needed.

4.3. Oral histories

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

4.4. Documentation

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

5. DESCRIPTION OF THE AREA

The development and study area is located between the towns of Ogies and Kriel in Mpumalanga. The study area is located on portions of the farms Cologne 34 IS, Schoongezicht 218 IR, Leeuwfontein 219 IR, Zondagsvlei 9 IS and Kleinzuikerboschplaat 5 IS.

The topography of the study area is relatively flat and open with no distinct rocky outcrops or ridges present. Large sections of the 5 Seam Mining Project area has been agriculturally developed and are currently utilized for this purpose with recently ploughed and old fields covering large parts. Portions have been heavily impacted by mining activities in recent years. Although, some heritage sites (mostly grave sites and old farming-related structures) have been identified in the Khutala Colliery area in the past, many sites, features or material of cultural heritage origin or significance (if it did exist here in the past) would have been extensively disturbed or destroyed as a result of these activities. A few sites were identified within the 5 Seam Mining Project Area during the October 2020 assessment. One of these sites will be directly impacted by the proposed future mining activities.

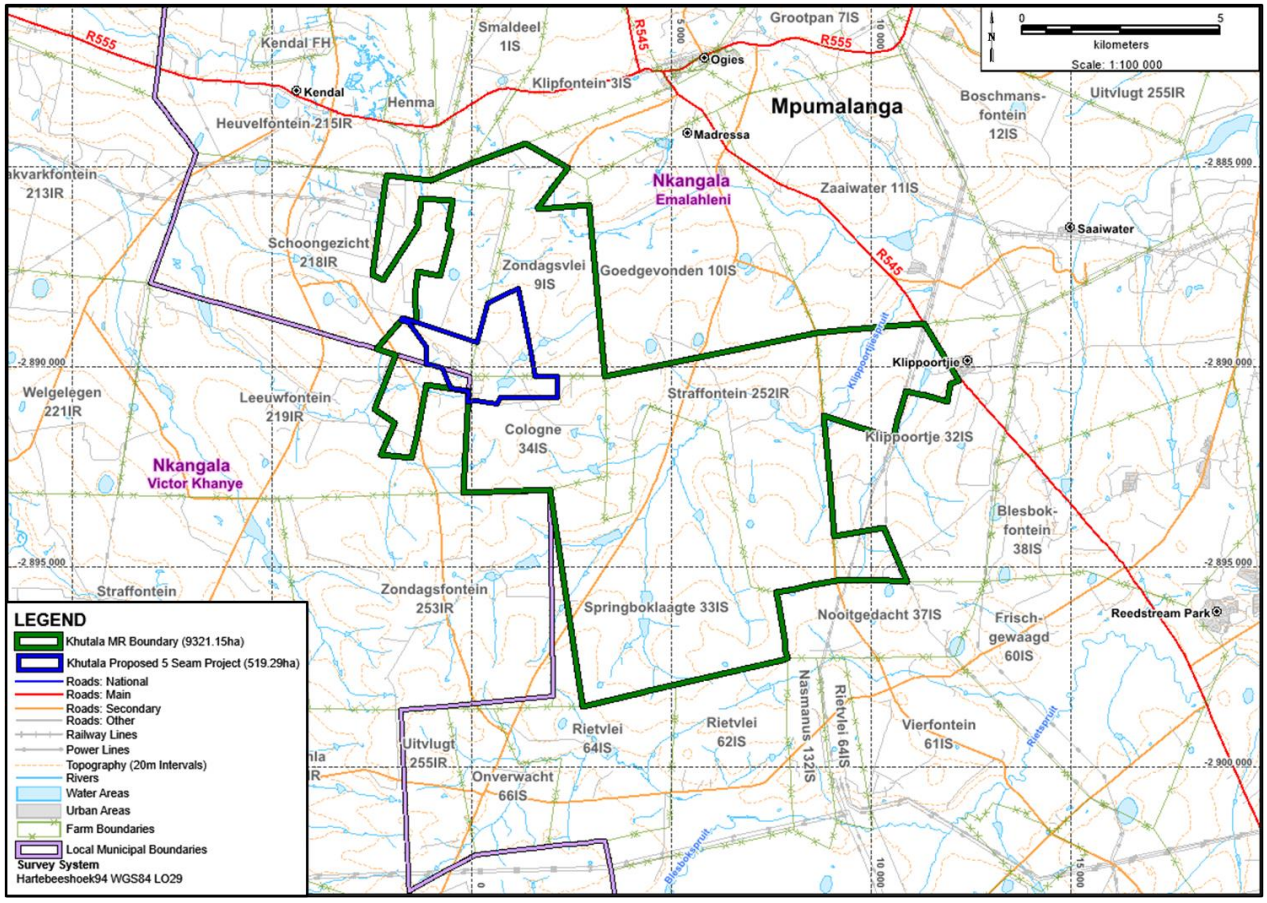

Figure 1: 5 Khutala Colliery Mining Right area and propose 5 Seam Mining Project Application Area (provided by Licebo).

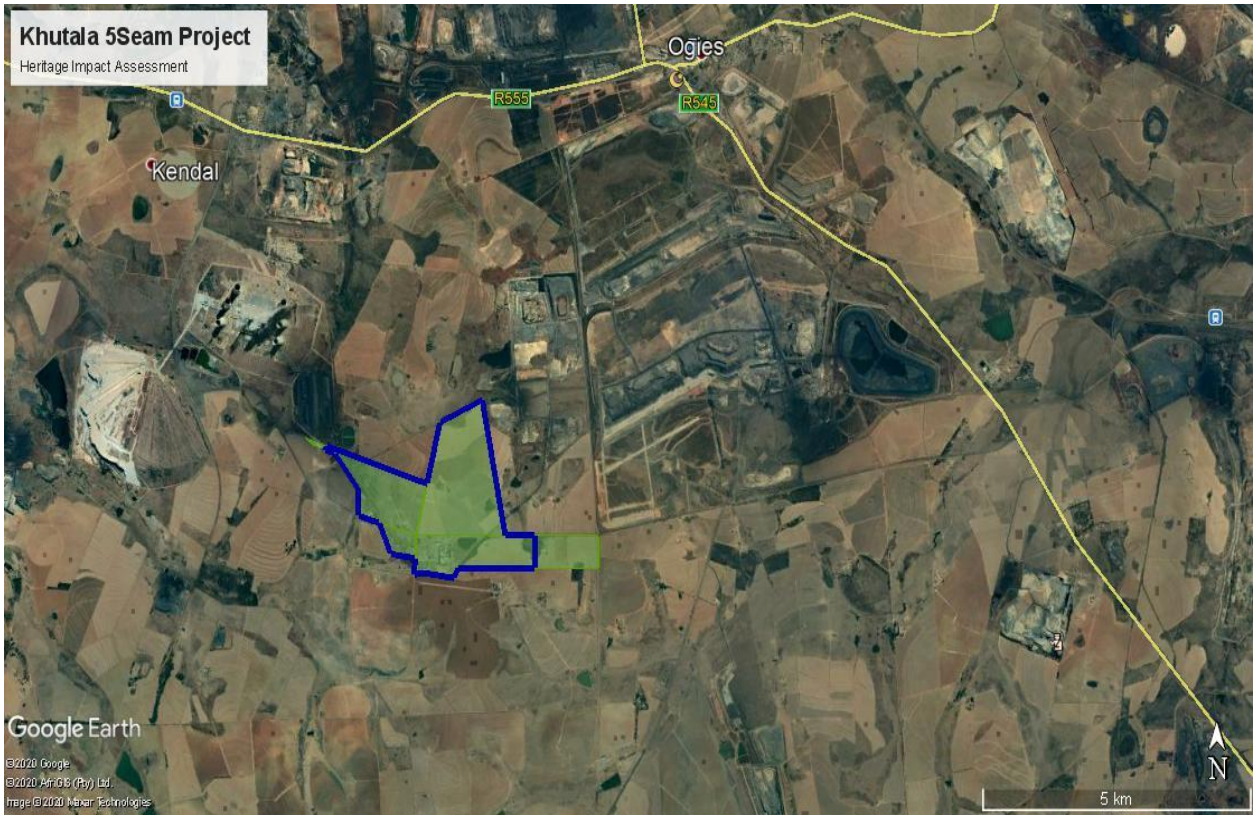

Figure 2: General location of study area (Google Earth 2020).

Figure 3: Closer view of study and Project Area. Note the ploughed fields and mining areas (Google Earth 2020).

6. DISCUSSION

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa the Stone Age can be divided in basically into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago
Middle Stone Age (MSA) less than 300 000 – 20 000 years ago
Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

The closest known Stone Age occurrences are Late Stone Age sites at Carolina and Badplaas, and rock painting sites close to Machadodorp, Badplaas and Carolina. Rock art is also found close to the Olifants River and at the Rietspruit near Witbank (eMalahleni) [Bergh 1999: 4-5]. Some individual Later Stone Age artifacts were identified in the larger area during a 2007 HIA for Goedgevonden Colliery, but the location of the site is not indicated (De Jong 2007: 19).

No Stone Age sites or material were identified and recorded during the October 2020 field assessment. If any Stone Age material are to be found these would more than likely be single or small scatters of stone tools in open-air contexts.

The Iron Age is the name given to the period of human history when metal was mainly used to produce metal artifacts. In South Africa it can be divided in two separate phases (Bergh 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.

Based on Tom Huffman's research LIA sites, features or material that could present in the larger area will be related to the Ntsuanatsatsi facies of the Urewe Tradition, dating to between AD1450 and AD1650 (Huffman 2007: 167) or the Makgwareng facies of the same dating to between AD1700 & AD1820 (Huffman 2007: 179). According to De Jong no Iron Age sites or features were identified during his assessment of the Goedgevonden area and if any did exist here in the past recent farming and mining activities would have disturbed or destroyed any traces (De Jong 2007: 20).

No Early or Middle Iron Age sites have thus far been located on the Highveld. However, Late Iron Age stone walled sites do occur in the area. Several large Late Iron Age settlement complexes occur in this region, especially to the south of Kriel and on the farm Wildebeestkuil, close to Kinross, 24km south west of Kriel. This site was probably occupied at a very late stage in the Iron Age, after the Hlubi attack on the Tlokoa which marked the start of the Difaqane in 1821. Ceramics from these Late Iron Age sites are part of the UItkoms Facies of the Blackburn Branch, while the site layout type is referred to as Klipriviersberg/Group III. They were most likely occupied between AD 1650 and AD 1820 (Orton 2017: 9-10).

Van Schalkwyk noted in 2003 that Iron Age occupation only commenced circa AD1500 in the vicinity of Kriel and that settlement tended to be near to water sources and rock outcrops. He mapped a number of Iron Age sites about 10 km south of Kriel. Van Vollenhoven (in 2016) reported two Late Iron Age sites to the southeast of Kriel. Huffman and Calabrese (in 1996) located just three Iron Age (Moloko) potsherds during their survey some 5 km northeast of the present study area but no sites (Orton 2017:10). The author of this report worked on Late Iron Age sites near Kriel (See Pelser et.al 2007), while he recently recorded similar sites near Secunda (2019).

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 earliest European group to move through the larger geographical area close to the study area was that of Schoon in 1836 (Bergh 1999: 13).

Background information on the archaeology and history of the specific study area and larger geographical area is contained in a 2015 report by Celliers, while information on cultural heritage sites located in the study area was also found in the same report. Historians agree that the earliest Africans to inhabit in the Lowveld in Mpumalanga were of Sotho, or more particularly Koni-origin. According to Bergh no signs of major Stone Age or Iron Age terrains are present in the vicinity of the Ogies area. The Ogies area was vacant of any settlement until the advent of the nineteenth century, when the Phuthing Tribe was prominent in the area to the north thereof (Celliers 2015: 11).

The Difaqane (Sotho), or Mfekane ("the crushing" in Nguni) was a time of bloody upheavals in Natal and on the Highveld, which occurred around the early 1820's until the late 1830's. It came about in response to heightened competition for land and trade, and caused population groups like gun-carrying Griquas and Shaka's Zulus to attack other tribes. Mzilikazi and his raiders had moved from the Northern Nguni area to the area north of the Vaal River by 1821. It has been recorded that the Ndebeles first attacked the Phuthing tribe, which in turn migrated to the south of the Vaal River and joined groups of Southern Sotho speakers. The Phuthing and Southern Sotho tribes moved westward and northward and started raiding Tswana communities in the surrounding area. The Phuthing were commanded first by Chief Tshane, and later Ratsebe. As the Phuthing under Ratsebe moved eastwards along the Vaal River, they collided with Mzilikazi's Ndebele once more. The Phuthing and other raiding groups were finally taken captive in 1823 by Mzilikazi's men (Celliers 2015: 10-11).

During the time of the Difaqane, a northwards migration of white settlers from the Cape was also taking place. Some travellers, missionaries and adventurers had gone on expeditions to the northern areas in South Africa – some as early as in the 1720's. One such an adventurer was Robert Scoon, who formed part of a group of Scottish travellers and traders who had travelled the northern provinces of South Africa in the late 1820s and early 1830s. Scoon had gone on two long expeditions in the late 1820s and once again ventured eastward and northward of Pretoria in 1836. During the latter journey, he passed by the area where Ogies is located today (Celliers 2015: 11).

By the late 1820's, a mass-movement of Dutch speaking people in the Cape Colony started advancing into the northern areas. This was due to feelings of mounting dissatisfaction caused by economical and other circumstances in the Cape. This movement later became known as the Great Trek. This migration resulted in a massive increase in the extent of that proportion of modern South Africa dominated by people of European descent. As can be expected, the movement of whites into the Northern provinces would have a significant impact on the black farmer - herders who populated the land. By 1860, the population of whites in the central Transvaal was already very dense and the administrative machinery of their leaders was firmly in place. Many of the policies that would later be entrenched as legislation during the period of apartheid had already been developed (Celliers 2015: 11-12).

The discovery of diamonds and gold in the Northern provinces had very important consequences for South Africa. After the discovery of these resources, the British, who at the time had colonized the Cape and Natal, had intensions of expanding their territory into the northern Boer republics. This eventually led to the Anglo-Boer War, which took place between 1899 and 1902 in South Africa, and which was one of the most turbulent times in South Africa's history. During the British march into the Transvaal between February and September 1900, several troops passed by the area where Ogies is situated today. The battalions of Lieutenant Generals J. French, R. Pole-Carew and F. Roberts all travelled close by the Witbank area and through Middelburg. A railway line ran along this route at the time (Bergh, 1999: 51). At the time of the War, two railway stations were located in the vicinity of the Witbank/Ogies area, and close to each a black concentration camp had been established.

At Middelburg, about 20 kilometers to the east of Witbank, one white and one black concentration camp was also set up. No skirmishes took place in the direct vicinity of the Ogies area (Celliers 2015: 12-13). Ogies is a small town situated 27 km south of Witbank in the Mpumalanga province. It is surrounded by coal-mines. The name is derived from the farm Oogiesfontein (fountain with many "eyes") on which the railway station was built. According to Celliers the name of the town was originally misspelt as Oogies, but corrected by the Place Names Commission in 1939. Ogies is on the link railway from Springs to Witbank and is the junction for the Broodsnyersplaas, where a large power station was erected (Celliers 2015: 17).

According to De Jong many of the farms in the area were established in the 1870's and that some of the graveyards located here attest to the practice of employing local African communities as farm laborers. The town of Ogies developed around the railway station which was built on the farm Ogiesfontein in 1928 (De Jong 2007: 21).
Many sites, structures and features dating to the recent historical period have been identified in the larger geographical area, including homesteads, farm laborer remains and graves.

During a 2007 Heritage Impact Assessment for Khutala Colliery, Matakoma Heritage Consultants recorded a fairly large number of sites dating to the recent historical age in the larger and specific study area. Most of these sites are represented by graveyards/cemeteries and farming-related homesteads and associated structures (Fourie 2007). Only 3 of these sites are located in the 5 Seam Mining Project Mining Project Area, with Site MHC45 (Site 2 in this report) that will be directly impacted by the proposed future mining activities.

During the October 2020 assessment two sites were identified in the study area (both of these also recorded in 2007). The third site mentioned by Fourie could not be traced. No new heritage sites were identified in October 2020. The sites and recommended mitigation measures will be discussed below.

6.1. RESULTS OF THE OCTOBER 2020 STUDY AREA ASSESSMENT

As indicated earlier large parts of the study area have been transformed and impacted by historical & current farming activities (ploughing/crop growing), as well as older and ongoing mining related operations. As a result if any sites, features, or material of cultural heritage (archaeological and/or historical) origin or significance did exist here in the past it would have been extensively disturbed or even destroyed to a large degree. That being said, an earlier 2007 assessment of the larger area did identify many recent historical farmsteads, related infrastructure, and grave sites.

Figure 4: Mining related infrastructure at the Plant area.

Figure 5: More mining infrastructure.

Figure 6: A view of some old farming area with mining infrastructure visible.

Figure 7: View of ploughed fields.

Figure 8: More ploughed fields in the study area.

Figure 9: Section of ploughed field with conveyor belt visible.

Figure 10: Another section of the study area. This area has been impacted by some diggings & the dumping of refuse and other material.

Figure 11: Another general view of a part of the study area.

Figure 12: Current farmstead/homestead in the area. The farmstead and related structures are of recent age and will not be directly impacted.

Figure 13: Impacts on the area include Eskom Powerlines.

Figure 14: Some rehabilitated areas where earlier mining has impacted.

Figure 15: Another view of the impact of mining and Eskom-related activities in the area.

Figure 16: Another example of the impact of mining and agriculture in the area.

Graves and Heritage Sites located in the or near the 5 Seam Mining Project Area

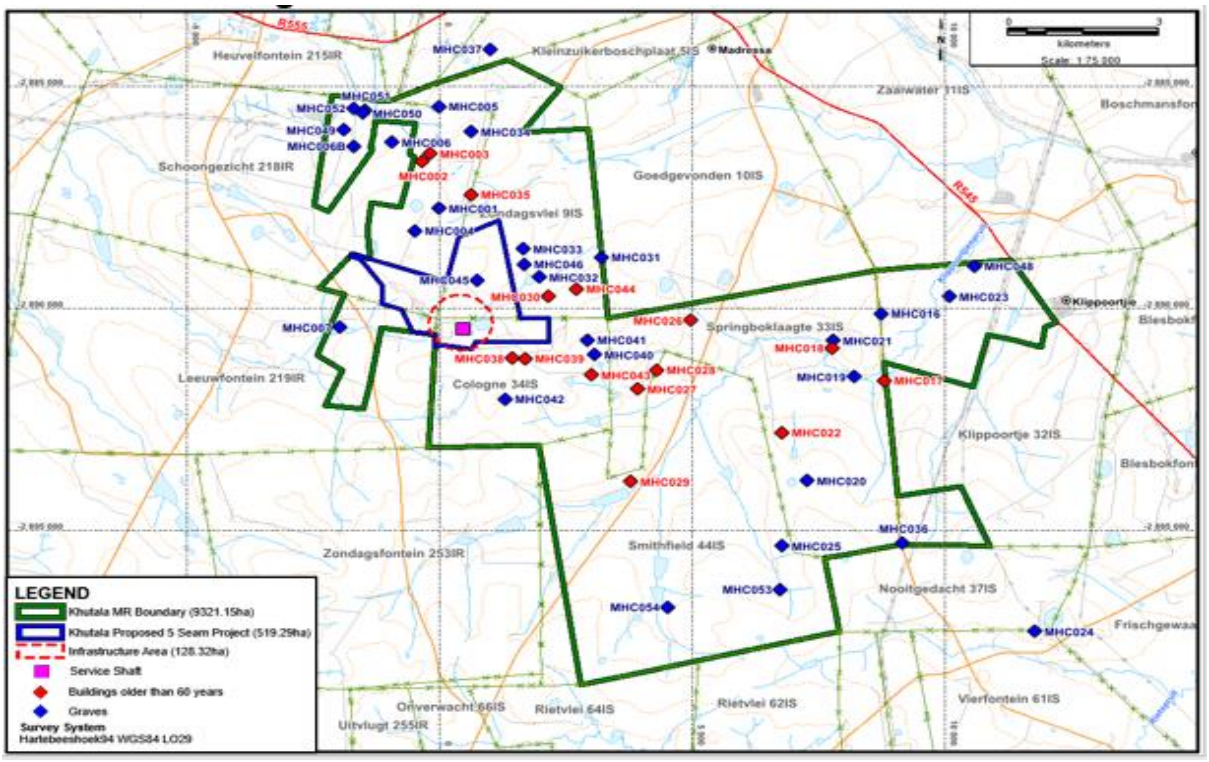

Figure 17: Graves and Heritage Sites near or in the proposed project area.

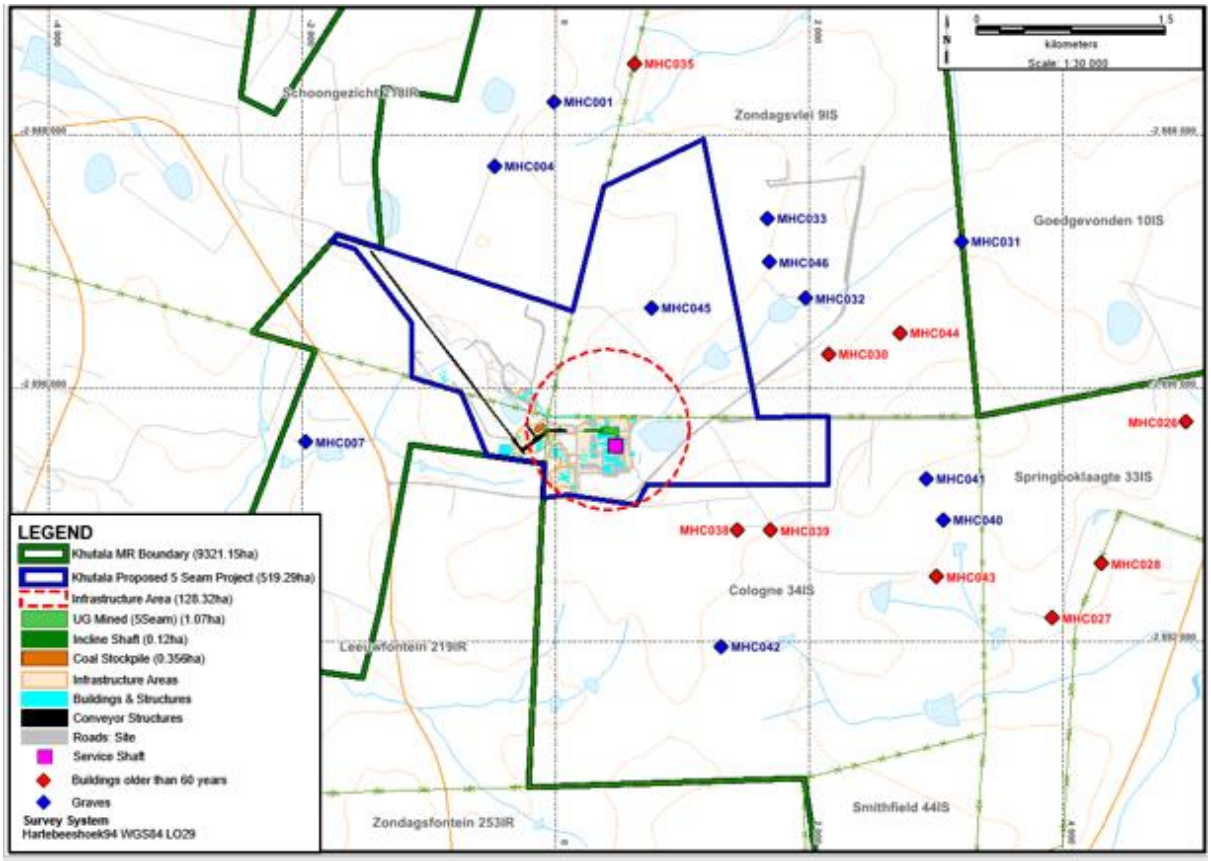

Figure 18: Site 2 (MHC45) located in the 5 Seam Mining Project study area.

Site 1 (MHC40)

Site is a graveyard that contains in excess of 100 graves (possibly up to 150). In 2007 Matakoma recorded the site under Site MHC40. According to the 2007 report there were at least 50 graves, and that based on archival research some of these graves could date from the 1930's (Fourie 2007: 54-55).

The 2020 assessment found that many of the graves have some form of headstone with legible inscriptions, although some are unmarked without any headstones. The dates of death that could be determined range between the 1970's and early 2000's. Some of the family names identified include Sibanda, Mnguni, Malimela, Mabhena, Molefe, Sihlangu and Monareng.

Although the site is located just outside the 5 Seam Mining Project Area ,there will be some indirect impacts on the site. Descendants of the deceased might be limited from visiting the site and graves and a buffer zone of at least 30m from the outer perimeter within which no work should be allowed must be placed around the site.

There are two options (mitigation measures) available in dealing with possible impacts on a Grave Site from any development. These are as follows:

Option 1

The 1st and preferred option will be to leave the site and graves on it intact. This will entail demarcating the site with a proper boundary fence and providing an entrance gate for potential visitors (descendants/family members of the deceased). The site would also have to be sign-posted as a Grave Site and will have to be cleaned and each grave marked, numbered and included in a Graves Register. A Graves Management Plan will have to be drafted and implemented as part of the Development. A 30m buffer zone (from the outside boundary fence of the site) will also have to be adhered to, with no development allowed in this exclusion zone.

Option 2

The 2nd Option available is the exhumation and relocation of the graves from the site. This entails the following:

a. Detailed social consultation/public participation in the form of Newspaper Advertisements, the erection of site notices and possibly Radio Announcements. This is in order to try and trace any possible descendants of the deceased buried here and to obtain their consent for the exhumation and relocation work. These advertisements and notices need to be run for 60 days before permit applications to various government and local authorities can be undertaken. This includes SAHRA, Department of Health, the Municipality and the SAP.

b. Only once the permits have been issued can the physical work be undertaken. A registered undertaker also needs to be contracted to be part of the process.

It needs to be noted that the costs involved with Option 2 can be high and that the time-delays can be quite long. However, with Option 1 the commitment to preserving the site and the graves on it is ongoing and could lead to conflict with family members in terms of site visits/access and possible security issues.

GPS Location: S26 07 40.90 E29 01 50.00
Cultural Significance: High – Graves always carry a High Significance rating
Heritage Significance: Grade III: Other heritage resources of local importance and therefore worthy of conservation.
Field Ratings: Local Grade IIIB: Should be included in the heritage register and may be mitigated (High/Medium significance).
Mitigation: See above

Figure 17: A view of Grave Site 1 (MHC40).

Figure 18: Another view of Site 1.

Site 2 (MHC45)

Figure 19: A view of Grave Site 2 (MHC45).

This site was also recorded in 2007 by Matakoma Heritage (as Site MHC45). In their report it is indicated that there are 8 stone-packed graves without any headstones (Fourie 2007: 64).

The 2020 assessment recorded 7 stone-packed graves. A local farmer indicated that the site is visited by family members but that this has not happened for a number of years. It might therefore be possible to trace descendants if the graves have to be exhumed and relocated.

The site is located in the project area and will be directly impacted. As with Site 1 the 2 Options related to mitigation is available.

GPS Location: S26 06 46.70 E29 00 27.10
Cultural Significance: High – Graves always carry a High Significance rating
Heritage Significance: Grade III: Other heritage resources of local importance and therefore worthy of conservation.

Field Ratings: Local Grade IIIB: Should be included in the heritage register and may be mitigated (High/Medium significance).

Mitigation: See above

6.2. Impact/Risk Assessment

This denotes the impact of the proposed future mining activities on Grave Site 2 (MHC45) as it falls directly in the area of impact.

SEVERITY CRITERIA

INTENSITY = MAGNITUDE OF IMPACT	RATING
Insignificant: impact is of a very low magnitude	1
Low: impact is of low magnitude	2
Medium: impact is of medium magnitude	3
High: impact is of high magnitude	**4**
Very high: impact is of highest order possible	5

FREQUENCY = HOW OFTEN THE IMPACT OCCURS	RATING
Seldom: impact occurs once or twice	1
Occasional: impact occurs every now and then	2
Regular: impact is intermittent but does not occur often	3
Often: impact is intermittent but occurs often	4
Continuous: the impact occurs all the time	**5**

DURATION = HOW LONG THE IMPACT LASTS	RATING
Very short-term: impact lasts for a very short time (less than a month)	1
Short-term: impact lasts for a short time (months but less than a year)	2
Medium-term: impact lasts for the for more than a year but less than the life of operation.	3
Long-term: impact occurs over the operational life of the proposed extension.	4
Residual: impact is permanent (remains after mine closure)	**5**

EXTENT

EXTENT = SPATIAL SCOPE OF IMPACT/ FOOTPRINT AREA / NUMBER OF RECEPTORS	RATING
Limited: impact affects the mining area	**1**
Small: impact extends to the neighbouring farmers	2
Medium: impact extends to surrounding farmers beyond the immediate neighbours	3

Large: impact affects the area covered by the local municipal area	4
Very Large: The impact affects an area larger than the local municipal area	5

PROBABILITY

PROBABILITY = LIKELIHOOD THAT THE IMPACT WILL OCCUR	RATING
Highly unlikely: the impact is highly unlikely to occur	0.2
Unlikely: the impact is unlikely to occur	0.4
Possible: the impact could possibly occur	0.6
Probable: the impact will probably occur	0.8
Definite: the impact will occur	**1**

Based on the above ratings, the Impact Significance for Site MHC45 is given a rating of **2,83**. The negative impact thus falls between 2 & 3 (see below). Mitigation measures to reduce the impacts should therefore be implemented.

IMPACT SIGNIFICANCE

NEGATIVE IMPACTS

≤1	Very low	Impact is negligible. No mitigation required.
>1≤2	Low	Impact is of a low order. Mitigation could be considered to reduce impacts. But does not affect environmental acceptability.
>2≤3	Moderate	Impact is real but not substantial in relation to other impacts. Mitigation should be implemented to reduce impacts.
>3≤4	High	Impact is substantial. Mitigation is required to lower impacts to acceptable levels.
>4≤5	Very High	Impact is of the highest order possible. Mitigation is required to lower impacts to acceptable levels. Potential Fatal Flaw.

POSITIVE IMPACTS

≤1	Very low	Impact is negligible.
>1≤2	Low	Impact is of a low order.
>2≤3	Moderate	Impact is real but not substantial in relation to other impacts.
>3≤4	High	Impact is substantial.
>4≤5	Very High	Impact is of the highest order possible.

MHC41

This site was identified by Matakoma Heritage in 2007. They indicated that it contained two graves with headstones and no visible dates or names indicated (Fourie 2007: 56). This site could not be found during the 2020 site assessment and although it is possible that they are

covered by grass/vegetation or that they have been impacted by the diggings and refuse dumping close to/at the location, care should be taken that the site not be impacted before a detailed assessment has been undertaken at the location,

The same mitigation measures as for the other 2 sites should be adhered to and implemented before development work commences.

GPS Location: S26 07 30.61 E29 01 45.37
Cultural Significance: High – Graves always carry a High Significance rating
Heritage Significance: Grade III: Other heritage resources of local importance and therefore worthy of conservation.
Field Ratings: Local Grade IIIB: Should be included in the heritage register and may be mitigated (High/Medium significance).
Mitigation: See above

Figure 20: Site MHC41 (from Matakoma 2007: 56).

Figure 20: Location of the site recorded in the study area (Google Earth 2020).

It should be noted that although all efforts are made to cover a total area during any assessment and therefore to identify all possible sites or features of cultural (archaeological and/or historical) heritage origin and significance, that there is always the possibility of something being missed. This will include low stone-packed or unmarked graves. This aspect should be kept in mind when development work commences and if any sites (including graves) are identified then an expert should be called in to investigate and recommend on the best way forward.

7. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it is possible to say that the Phase 1 HIA for the Khutala 5 Seam Mining Project Mining Project was conducted successfully. The development and study area is located between the towns of Ogies and Kriel in Mpumalanga. The study area is located on portions of the farms Cologne 34IS, Leeuwfontein 219IR, Schoongezicht 218IR and Zondagsvlei 9IS.

Background research indicates that there are some cultural heritage sites and features in the larger geographical area within which the study area falls. During a 2007 Heritage Impact Assessment for Khutala Colliery, Matakoma Heritage Consultants recorded a fairly large number of sites dating to the recent historical age in the larger and specific study area. Most

of these sites are represented by graveyards/cemeteries and farming-related homesteads and associated structures. Only 3 of these sites are located in the 5 Seam Mining Project Area.

During the October 2020 assessment two sites were identified in the study area (both of these also recorded in 2007). The third site mentioned by Fourie could not be traced. No new heritage sites were identified in October 2020. Site 2 (MHC45) will be directly impacted by the proposed future mining activities and mitigation measures will have to be implemented to minimize these impacts.

Sites 1 & 2 recorded in 2020 related to Sites MCH040 & MHC045 respectively. While Site MHC041 recorded in 2007 could not be found in 2020. All three sites are grave sites and with graves always carrying a High Significance Rating from a Cultural point of view care should be taken not to negatively impact on them in any way. The required mitigation measures proposed should be implemented before any mining related activities commence.

The following is recommended:

Option 1

The 1st and preferred option will be to leave the site and graves on it intact. This will entail demarcating the site with a proper boundary fence and providing an entrance gate for potential visitors (descendants/family members of the deceased). The site would also have to be sign-posted as a Grave Site and will have to be cleaned and each grave marked, numbered and included in a Graves Register. A Graves Management Plan will have to be drafted and implemented as part of the Development. A 30m buffer zone (from the outside boundary fence of the site) will also have to be adhered to, with no development allowed in this exclusion zone.

Option 2

The 2nd Option available is the exhumation and relocation of the graves from the site. This entails the following:

a. Detailed social consultation/public participation in the form of Newspaper Advertisements, the erection of site notices and possibly Radio Announcements. This is in order to try and trace any possible descendants of the deceased buried here and to obtain their consent for the exhumation and relocation work. These advertisements

and notices need to be run for 60 days before permit applications to various government and local authorities can be undertaken. This includes SAHRA, Department of Health, the Municipality and the SAP.

b. Only once the permits have been issued can the physical work be undertaken. A registered undertaker also needs to be contracted to be part of the process.

It needs to be noted that the costs involved with Option 2 can be high and that the time-delays can be quite long. However, with Option 1 the commitment to preserving the site and the graves on it is ongoing and could lead to conflict with family members in terms of site visits/access and possible security issues.

It should be noted that although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass cover and other factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward.

Finally, from a Cultural Heritage point of view the Khutala 5 Seam Mining Project Mining Project should be allowed to continue once the recommended mitigation measures have been implemented.

8. REFERENCES

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Project Application Area map: Provided by Licebo Environmental & Mining (Pty) Ltd courtesy South 32.

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APPENDIX A: DEFINITION OF TERMS:

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

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

Feature: A coincidental find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE

Historic value: Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

Aestetic value: Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

Scientific value: Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period

Social value: Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Rarity: Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

Representivity: Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

APPENDIX C: SIGNIFICANCE AND FIELD RATING:

Cultural significance:

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

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

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

Heritage significance:

- Grade I: Heritage resources with exceptional qualities to the extent that they are of national significance

- Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate

- Grade III: Other heritage resources of local importance and therefore worthy of conservation

Field ratings:

i. National Grade I significance: should be managed as part of the national estate

ii. Provincial Grade II significance: should be managed as part of the provincial estate

iii. Local Grade IIIA: should be included in the heritage register and not be mitigated (high significance)

iv. Local Grade IIIB: should be included in the heritage register and may be mitigated (high/ medium significance)

v. General protection A (IV A): site should be mitigated before destruction (high/medium significance)

vi. General protection B (IV B): site should be recorded before destruction (medium significance)

vii. General protection C (IV C): phase 1 is seen as sufficient recording and it may be demolished (low significance)

APPENDIX D: PROTECTION OF HERITAGE RESOURCES:

Formal protection:

National heritage sites and Provincial heritage sites – Grade I and II
Protected areas - An area surrounding a heritage site
Provisional protection – For a maximum period of two years
Heritage registers – Listing Grades II and III
Heritage areas – Areas with more than one heritage site included
Heritage objects – e.g. Archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

General protection:

Objects protected by the laws of foreign states
Structures – Older than 60 years
Archaeology, palaeontology and meteorites
Burial grounds and graves
Public monuments and memorials

APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or Scoping Phase – Establishment of the scope of the project and terms of reference.

2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.

3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.

4. Letter of recommendation for exemption – If there is no likelihood that any sites will be impacted.

5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.

6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.