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**A REPORT ON A HERITAGE ASSESSMENT FOR THE PROPOSED
VAALBULT MINING PROJECT ON PORTIONS OF THE FARM VAALBULT 3IT,
GERT SIBANDE DISTRICT MUNICIPALITY,
WEST OF CAROLINA, MPUMALANGA PROVINCE**

For:

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REPORT: APAC013/07

Project Reference Number: D011211

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SUMMARY

APelser Archaeological Consulting was appointed by Copper Leaf Consultants, on behalf of the Vaalbult Mining Company (Pty) Ltd, to conduct a Phase 1 Heritage Impact Assessment (which included a desktop study and field survey) on various portions of the farm Vaalbult 3IT, near Carolina in the Gert Sibande District Municipality in Mpumalanga. The development of the Vaalbult opencast coalmine is proposed.

The aims with the assessment were the identification, recording and assessment of any possible cultural heritage (archaeological & historical) resources in the area that could potentially be impacted on negatively by the proposed mining operations, and then to recommend suitable mitigation measures to minimize the potential impacts. Large sections of the farm has been disturbed due to agricultural activities (crop growing, ploughing), and as a result very little original vegetation still exist. If any sites did exist here in the past it would have been extensively disturbed or destroyed. Previous heritage studies in the larger geographical area provided some background on the archaeology and history of the study area. A number of sites were identified during the field work and the results of the assessment will be discussed in the report.

If the recommendations put forward at the end of this document are implemented, then, from a Cultural Heritage point of view, there would be no objection to the continuation of the proposed development.

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1. INTRODUCTION

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The extent of the area that had to be assessed was indicated by the client, and the work was limited to this area. The current landowners of the Vaalbult farm portions that will be mined also indicated the boundaries and were consulted during the fieldwork session.

2. TERMS OF REFERENCE

The Terms of Reference for the study were to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portions of the farm Vaalbult 3IT that will be impacted on by the proposed mining development;
3. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;
4. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;
5. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources;
6. 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. Grave yards and graves older than 60 years
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

The national estate 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 on these resources. 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 000m² or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m²
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

Structures

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

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

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

Archaeology, palaeontology and meteorites

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

- a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or 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 or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or

- c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

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)**.

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

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, while previous studies done in the larger geographical area were also consulted. The sources utilized in this regard are indicated in the bibliography.

4.2 Field survey

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

The assessment was undertaken mainly on foot, although some sections were traversed by vehicle. Areas with the potential of containing archaeological and other sites were focused on

during the study. This included rocky outcrops, erosion dongas and unnatural clumps of trees and other vegetation. The Heritage specialist for the project has conducted previous studies in the larger area, while other specialists have also carried out research in the area in the past. As a result many sites are known to exist in the larger geographical area. It has to be stated that big portions of land in the area has been completely disturbed by agriculture (ploughing, crop production).

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. During the field survey current landowners were consulted, who indicated the existence and location of some sites (graves) in the study area.

4.4 Documentation

All sites, objects, features and structures identified are documented according to the general minimum standards accepted by the archaeological profession. 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 proposed Vaalbult Mining development is located on portions of the farm Vaalbult 3IT, in the Gert Sibande District Municipality, 13km west of Carolina in Mpumalanga. The mining operations will be mainly opencast, while related infrastructure and services will be implemented as well

The topography of the area is generally relatively flat, with rolling grass veld and some low rocky ridges/outcrops in certain portions. Visibility in the area was fairly good, with the biggest portion of land ploughed and agriculturally developed, and with sparse tree cover. Clumps of trees (bluegum stands) occur throughout. Dense grass cover made visibility difficult though. If any archaeological and historical sites, features and objects did exist here in the past, these would have been disturbed or destroyed to a large degree. A water course (a tributary of the Vaalwaterspruit runs through the area, and a large pan (Vaalbult Pan?) is located in the northern section of the study area.

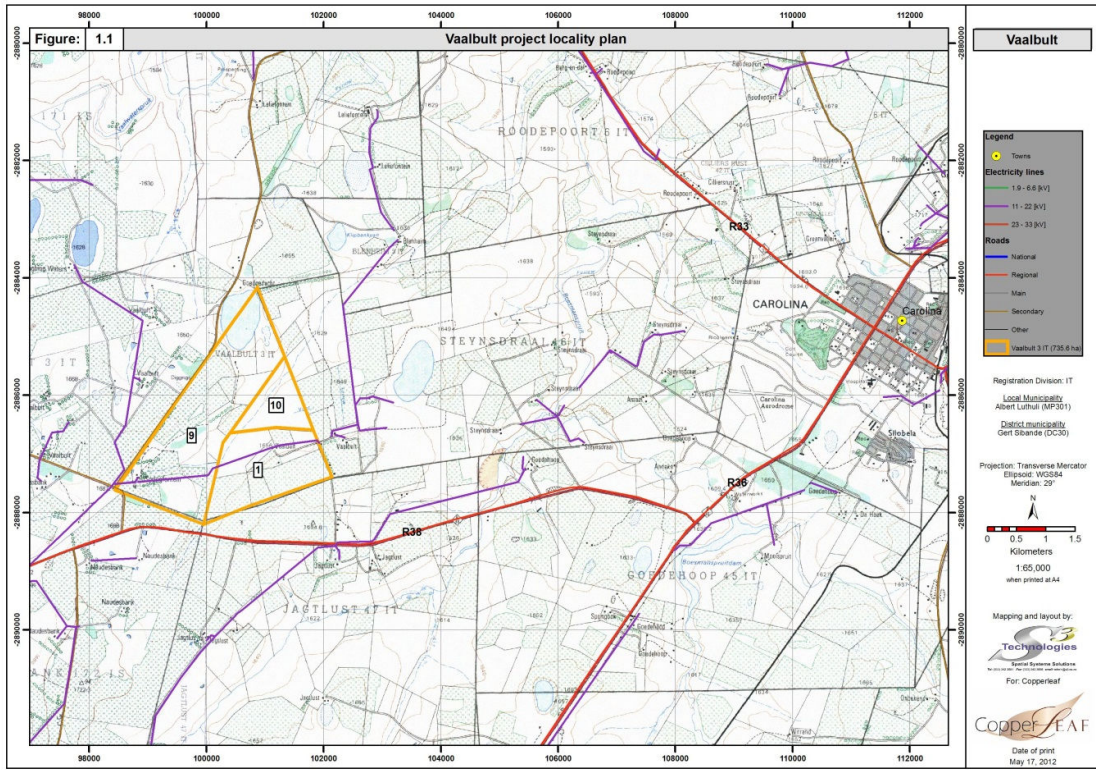


Figure 1: Topographic location of study area (Map courtesy Copper Leaf)



Figure 2: Aerial view of study area (Google Earth 2013 – Image date 2004).
Note the agricultural fields.

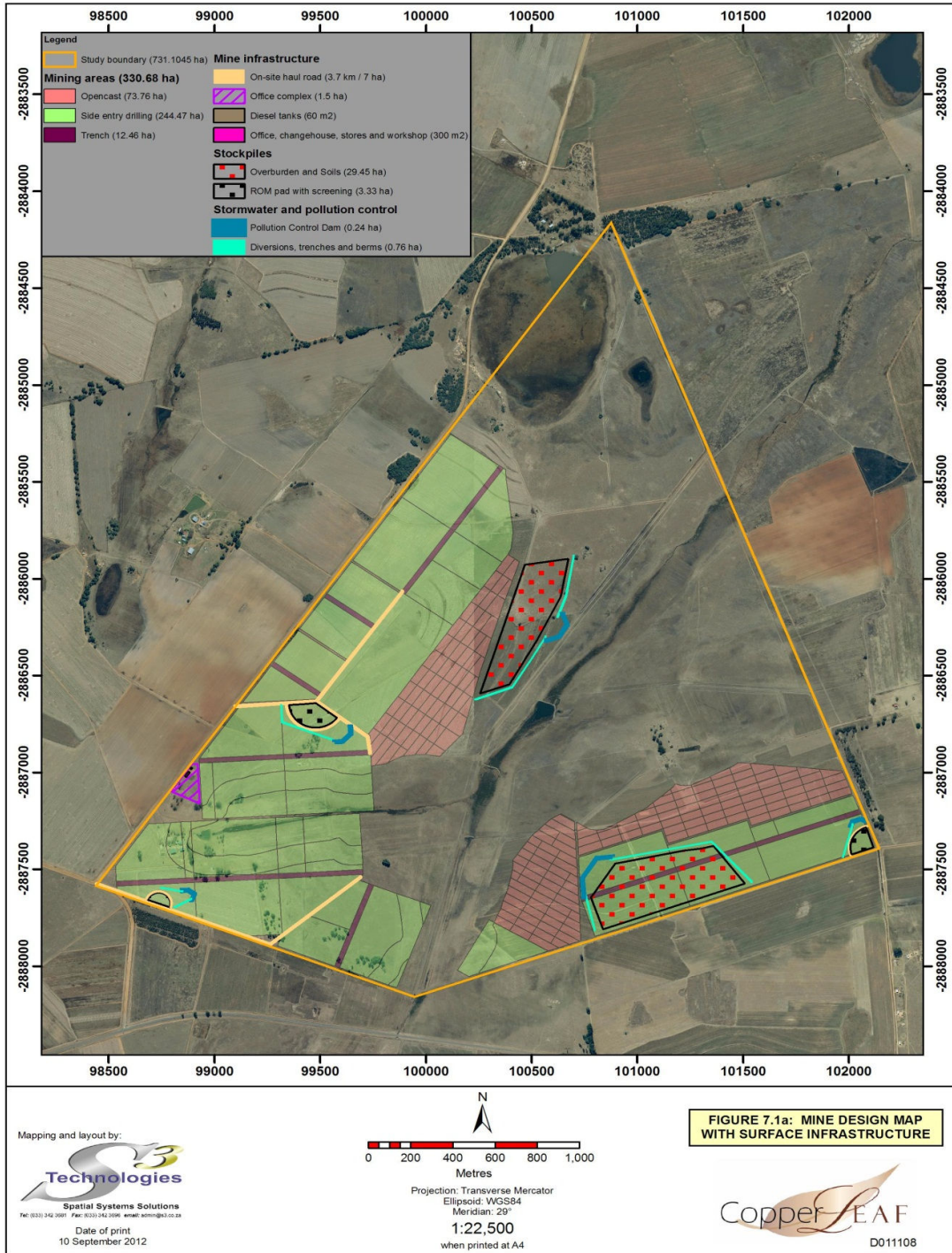


Figure 3: Layout plan of mining development (Map courtesy Copper Leaf).



Figure 4: View of area close to pan.



Figure 5: Another view of a section of the study area. Note the grass & sparse tree cover.



Figure 6: Crop fields dominate large sections of the area.



Figure 7: Another view. Note the rolling grass fields and ploughed fields.



Figure 8: View of a section of the Spruit running through the area close to the large pan.

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 basically into three periods. It is however important to note that these 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).

There are no known Stone Age sites in the study area, although there are some in the larger geographical area. The closest known Stone Age site is located a few kilometers south-west of Carolina at a site called Groenvlei, a Later Stone Age site which includes rock paintings (Bergh 1999: 4-5). No Stone Age sites or artifacts were found during the heritage impact assessment. This does not however mean that individual tools or scatters of stone tools might not be found in the area, especially near the spruit, or close to the large pan that does occur in the area. It is however unlikely that the opencast mining operations will impact on these areas (from an environmental consideration).

The Iron Age is the name given to the period of human history when metal was mainly used to produce artifacts. 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 Iron Age sites are known to exist in the area, although there are a fairly large number of Late Iron Age stone walled sites in the bigger geographical area that includes Lydenburg, Dullstroom, Machadodorp, Badplaas and Belfast, and south and west of Chrissiesmeer (Bergh 1999: 6-7). Some of the sites might be related to the so-called Marateng facies of the Urewe pottery tradition of the LIA, dating to between AD1650 and 1840 (Huffman 2007: 207). No Iron Age sites or material were identified in the study area.

The expansion of early farmers, who, among other things, cultivated crops, raised livestock, mined ore and smelted metals, occurred in this area between AD 400 and AD 1100. Dates from Early Iron Age sites indicated that by the beginning of the 5th century AD Bantu-speaking farmers had migrated down the eastern lowlands and settled in the Mpumalanga Lowveld. Subsequently, farmers continued to move into and between the

Lowveld and Highveld of Mpumalanga until the 12th century. These Early Iron Age sites tend to be found in similar locations. Sites were found within 100m of water, either on a riverbank or at the confluence of streams. The close proximity to streams meant that the sites were often located on alluvial fans. The nutrient rich alluvial soils would have been favoured for agriculture. The availability of floodplains and naturally wetter soils would have been important for the practice of dry land farming. This may have been particularly so during the Early Iron Age when climate reconstruction for the interior of South Africa suggests decreased rainfall between AD 900 and AD 1100 and again after AD 1450. Burned daga and plaster with pole impressions found at these early Lowveld sites indicated that early farmers lived in fairly permanent agricultural villages.

Grindstones and an imprint of millet or domestic *Pennisetum* in a piece of pottery from an AD 400 site on the northern border of Mpumalanga provided the first evidence of the cultivation of millet in South Africa. Remains of iron tools indicated that metalworking was also practiced. Iron was an important commodity, and ores in the form of haematite and magnetite were either picked up off the surface or mined from shafts dug into the ground. Large cattle byres with pits were also significant features of EIA Highveld sites dating from AD 600. While there is some evidence that the EIA continued into the 15th century in the Lowveld, on the escarpment it had ended by AD1100. The Highveld, particularly around Lydenburg, Badfontein, Sekhukhuland, Roosenekal, and Steelpoort, became active again from the 15th century onwards. This later phase, termed the Late Iron Age (LIA), was accompanied by extensive stonewalled settlements. Trade no doubt played an important role in the economy of these early societies. Goods were traded both locally and further afield. Control of resources such as metal provided a solid economic base that was fairly impervious to changes in the environment. Traditional sources of wealth were easily bolstered as metals were used in place of cattle to encourage key marriage alliances, and at the same time used to purchase livestock and other trade items from outside the country. Local trade consisted of metal, salt, thatch, poles, cattle and grain. Salt was produced from alkaline springs. This valuable commodity could be obtained by paying a tithe to the chief on whose land the salt was located. However, there were examples of mass production where salt was 'balled' for transport and sold for huge profit in salt scarce areas.

By the 1700s, with growing trade wealth, economically driven centers of control began to emerge and, following the establishment of Portuguese trade posts, the Mpumalanga landscape became an important thoroughfare for both local and foreign traders. Mpumalanga was populated by multiple and ethnically diverse but interrelated communities. It was inhabited by the San (Hunter-Gatherer, Basarwa or Bathwa) groupings prior to the settlement of various Late Iron Age (LIA) farming communities, the ancestors of modern Sotho-Tswana and Nguni societies. The north-western and southern portions of the region came to be broadly occupied by the Kgatla (Bakgatla), Rolong (Barolong), Ntwane (Bantwane), Koni (Bakone), Kopa (Bakopa) and Southern Ndebele mixed farming communities. Despite their general association with LSA and their assumed disappearance, it is clear that San groups continued to interact with farmers in the Eastern Transvaal, as was the case elsewhere, and the evidence of a range of forms of coexistence warns us against drawing rigid distinctions between the two cultures. Material assemblages from excavated sites, San rock paintings and

engravings and cultural and linguistic evidence point to some forms of peaceful contacts between these diverse communities.

According to other recorded oral traditions ancestors of Bakone groupings occupied parts of the low country (Phalaborwa and Bokgaga near Leydsdorp) at an uncertain date. The main body of the Bakone appears to have been under the Matlala ruling lineage at the time of their fragmentation into a multiplicity of groups and subsequent chiefdoms around the 15th to 16th centuries. While some groups remained in the low country others ventured further west and southwards and Koni groups came to settle in the areas later called Ohrigstad, Lydenburg and Middelburg. Either before or at the start of the 17th century an early Nguni-speaking community entered the orbit of the Sotho-Tswana communities in the Transvaal and in particular the north-eastern Highveld. The Sotho-Tswana people commonly called this early Nguni offshoot Matebele, denoting Pursuers. According to P. Lekgoathi these Nguni groups accepted the appellation Matebele but pronounced it as Amandebele. Anthropologists and historians later rendered both Sotho-Tswana and Nguni terms as Ndebele.

In due course relations between other royal contenders degenerated into open confrontation. The Manala (Mabena) and Mhwaduba sections remained independently in and around Pretoria areas while the Ndzundza and Mthombeni groups moved north-eastward into the environs of the Steelpoort (Tubatse) River valley and the slopes of Bothasberg in Middelburg. There is evidence that Mzilikazi's Ndebele invaded the south-eastern and central Transvaal areas. Accounts of the Southern Ndebele, the Koni, the Kgatla, the Rolong and the Ntwane attest to Mzilikazi's sporadic plunder and their own counter raids of Mzilikazi's frequent raids. The Koni, Kopa and some Eastern Sotho fortified settlements in the Middelburg, Nelspruit (Waterval Boven, Sudwala Caves) and Lydenburg areas were attacked by intruding armies.

The above section comes from De Jong 2009: pp.24-26 (See References)

The start of the historical period in the area can roughly be ascribed to first the European farmers, travellers and other groups moving into the area in the 19th century. The first Europeans to move close by the area were the group of Schoon in 1836 (Bergh 1999: 13). Carolina was laid out in 1883 by a group of farmers, naming it in honour of Carolina Coetzee the wife of one of the first Voortrekkers who was one of the original owners of the land on which the town was established. It was proclaimed a township in 1887, became a subdistrict of Ermelo in 1894 and created a Municipality in 1904 (Praagh 1906: 381). It is indicated in this source already that coal is found all over the Carolina district – the productive mining of which at the time was awaiting the development of a better railway system (p.382). During the Anglo-Boer War the area also played a role, with a number of battles and skirmishes fought around Belfast (Battle of Berg-en Dal/Dalmanutha), Chrissiesmeer and Carolina (Bergh 1999: 51; 54).

The oldest map of the farm that could be obtained from the Chief Surveyor General's database (dating to 1896) indicates that the whole of the original farm was granted to one F.J.Combrink (the ancestor of one of the farmers still owning the western portions of the study area) on 10 February 1870. It was surveyed in October 1895 by E.J.P Jorissen (www.csg.dla.gov.za – Document No. B14136).

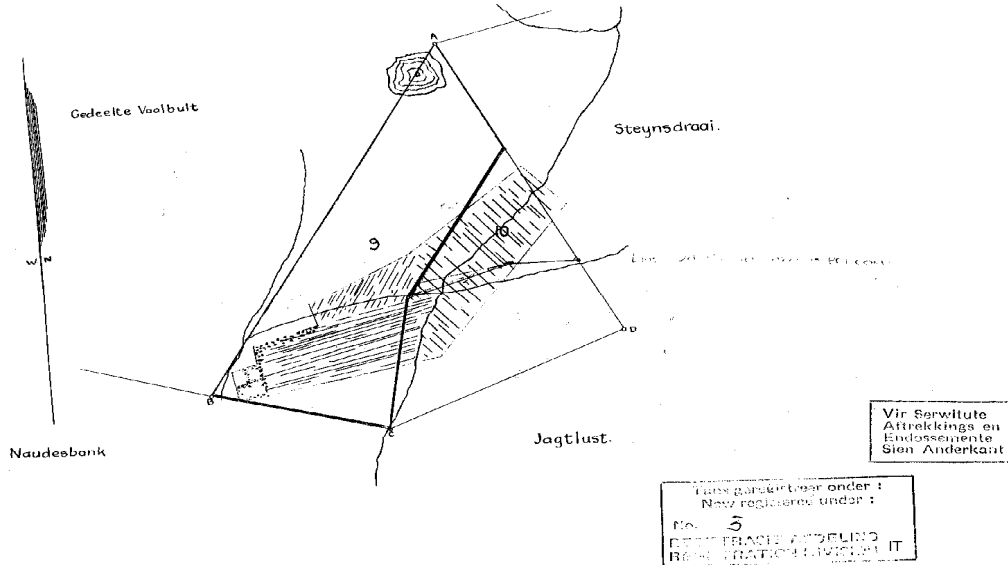
| ZIJDEN. | HOEKEN. | (Y) CO-ORDINATEN (X). |
|------------|----------------|-----------------------|
| AB 1111.72 | A 56° 47' 50" | A - 4318.59 + 4677.09 |
| BC 425.54 | B 75° 30' 30" | B - 5237.25 + 5303.17 |
| CD 615.97 | C 139° 53' 30" | C - 5381.29 + 4902.75 |
| DA 918.84 | D 87° 48' 10" | D - 5167.34 + 4325.13 |

1327/1896

WARE KOPIE.

Landmeter-Generaal,
Landmeter-Generaal's Kantoor,
Pretoria.

18-2-1957



Vir Sewlute
Aftrekkings en
Endossemente
Sien Anderkaart

Deze kaart behoort onder:
Nieuw gereguleerd onder:
No. 5
DEEL FRANSCH AANDELING
ROEDERFRANSCH DIVISION IT



De bovenstaande Figuur ABCD

bovattende 852

gelegen in het distrikt Carolina

Zuid-Afrikaanse Republiek, en gesesonde als hierboven vermeld.

De bakens zijn aangevezen door F.J. Combrink, Jhs Coetzee en den Landmeter

Van deze meting is volgens wet aan de aangrenzende grondeigenaren kennis gegeven. De gehele plaats werd oorspronkelijk in Leening

Afstand van het Dorp uitgegeven aan F.J. Combrink en Jhr - ontrent volgens Grondbrief dd. midden 10 Februarie 1870.

Gemeten in Oktober 1895.

door mij,

(Get) E.J.P. Jorissen,

Landmeter.

No. 2499/96
deze kaart zijn getuigbaar bestaanbaar.

Gedeekeurd. De zijden, hoeken en Grootte van

(Get) Johann Rissik
Landmeter-Generaal.

Gedeekeurd, geen postst.

IK, J.C. Minnaar Registrateur van Akten certificeer

dat deze kaart behoort tot Transport 4431/1896, op heden uitgereikt

ten faveure van Cornelius Jacobus Coetzee.

Registratie Kantoor 14 Sept. 1896

Landmeter-Generaal
Gepubliceerd in Register van 14 Sept. 1896

Landmeter-Generaal

Req. van Akten

Landmeter-Generaal's Kantoor,
No. 4499-1896, 7-800.

8 September 1896

Figure 9: Early map of Vaalbult showing the study area (CSG Document B14136).

Results of fieldwork

Stone Age finds in the area

As indicated earlier no Stone Age sites or finds (individual tools or scatters of tools) were identified in the area. However, it is possible that tools could be located along the spruit that runs through a portion of the area, as well as the close to the large pan situated at the northernmost corner of the area. From an ecological/environmental consideration these areas

will be avoided by mining operations in any case. However, it always a possibility that single, out of context, stone tools could be uncovered during development work.

Mitigation: Should any sites or finds be identified during the development of the proposed mine then an archeologist need to be consulted. It is highly recommended that any development actions associated with the Project stay clear of drainage lines (rivers/spruite) and other water bodies (pans)

Iron Age Sites

Once again no Iron Age sites, features or objects were identified or recorded during the assessment of the study area. If any did exist here in the past they would have been disturbed or completely destroyed during the agricultural activities (ploughing and crop growing) of the recent historical past. Iron Age sites are known to occur in the larger geographical area though, and if any remains are uncovered these should be reported. This could include previously unknown and unmarked burials.

Historical sites

All the sites identified and recorded during the field survey belong to this period (more recent past).

A unique stone architectural heritage was established in the Eastern Highveld during the second half of the 19th century well into the early 20th century. During this time period stone was used to build farmsteads and dwellings, both in urban and in rural areas. Although a contemporary stone architecture also existed in the Karoo and in the Eastern Free State Province of South Africa a wider variety of stone types were used on the Eastern Highveld. These included sandstone, ferricrete ('ouklip'), dolerite ('blouklip'), granite, shale and slate. The origins of a vernacular stone architecture in the Eastern Highveld may be ascribed to various reasons of which the ecological characteristics of the region may be the most important. The Eastern Highveld is generally devoid of any natural trees which could be used as timber in the construction of farmsteads, outbuildings, cattle enclosures and other structures while the scarcity of fire wood also prevented the manufacture (firing) of baked clay bricks. Stone therefore served as the most important building material on the Eastern Highveld (Pistorius 2007:17).

Farm homesteads with outbuildings that date from the more recent past occur throughout the Eastern Highveld. Many of these farm homesteads hold little historical significance. However, buildings and other infrastructure which are part of these farm homesteads may be older than sixty years or may approach this age. All, structures and buildings older than sixty years are protected by Section 34 of the National Heritage Resources Act (No 25 of 1999) (Pistorius 2007:18).

Many of these farm homesteads are associated with formal and informal graveyards. Dwellings which have been used by farm labourers and which have disintegrated over time are in many instances associated with informal graves and sometimes with informal cemeteries. These informal graves and cemeteries may occur in the most unexpected places - such as in maize fields where they have not been ploughed under over time (Pistorius 2007:18).

Site 1

The first site contains a single grave with a headstone located close to the homestead on Charles de Villiers' portion of Vaalbult. The sandstone headstone has an inscription which reads "**Hier Rust Helena Gloudina Erasmus Geb. Botha. Geb.17 Feb.1843. Overl. ? July 1925**". The grave is therefore older than 60 years of age and as a result it is protected by the Heritage Act. Graves are always sensitive and if impacted on negatively by development suitable mitigation measures to minimize or negate the impacts need to be implemented.

A number of mitigation measures can be recommended:

1. The site can be fenced-off, cleaned and a buffer zone of 20m meters around it established to ensure that the site is not impacted/vandalized. This option will also entail the drafting and implementation of a Heritage Management Plan
2. The grave can be exhumed and relocated after the required processes regarding graves have been followed. Part of the process will include social consultation and the obtaining of permits from SAHRA and the Provincial Dept. of Health (a registered undertaker needs to handle this part of the process).

Dense grass cover in the area of the grave made it difficult to see if there are more possible graves located here. There is always a possibility of more graves, and once the area has been cleaned the number of graves present could increase. Mr. De Villiers was only aware of the one grave however.

GPS Location: **S26 05.589 E29 59.325**

Cultural Significance: **High.**

Heritage Significance: **Grade III. Other heritage resources of local importance and therefore worthy of conservation.**

Field Ratings: General protection A (IV A). Site should be mitigated before destruction (high/ medium significance).

Mitigation: If impacted and can't be avoided then exhumation and relocation after following due process required by Law. Includes social consultation. Preferred mitigation though would be to fence-off, clean and manage

Probability of Impact: Probable

Duration of Impact: Long term

Scale of Impact: Site

Significance of Impact: High

Magnitude of Impact: High



**Figure 10: Headstone of grave
Site 1.**

Site 2

This site is the farmstead and outbuildings on the De Villiers farm portion. The original house seems to have been built in sandstone (a typical feature of historical farm houses on the Eastern Highveld), but the house has been altered extensively over the years and very little of the original remains. It is therefore not unique.

GPS Location: **S26 05.503 E29 59.296**

Cultural Significance: Low

Heritage Significance: Low/none

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

Mitigation: None required

Probability of Impact: Probable

Duration of Impact: Long term

Scale of Impact: Site

Significance of Impact: High

Magnitude of Impact: High



Figure 11: Site 2 farmstead.

Site 3

This is another grave site, indicated by Mr. de Villiers as probably belonging to farmworkers. All the graves are stone packed without any headstones. There are at least 5, but more could be found once the area has been cleared of grass cover. The age of the graves are unknown, but should at this stage be considered as possibly older than 60 years of age.

A number of mitigation measures can be recommended:

1. The site can be fenced-off, cleaned and a buffer zone of 20m meters around it established to ensure that the site is not impacted/vandalized. This option will also entail the drafting and implementation of a Heritage Management Plan
2. The graves can be exhumed and relocated after the required processes regarding graves have been followed. Part of the process will include social consultation and the obtaining of permits from SAHRA and the Provincial Dept. of Health (a registered undertaker needs to handle this part of the process).

GPS Location: S26 05.173 E29 59.462

Cultural Significance: High.

Heritage Significance: Grade III. Other heritage resources of local importance and therefore worthy of conservation.

Field Ratings: General protection A (IV A). Site should be mitigated before destruction (high/ medium significance).

Mitigation: If impacted and can't be avoided then exhumation and relocation after following due process required by Law. Includes social consultation. Preferred mitigation though would be to fence-off, clean and manage

Probability of Impact: Probable

Duration of Impact: Long term

Scale of Impact: Site
Significance of Impact: High
Magnitude of Impact: High



Figure 12: Site 3.



Figure 13: One of the graves on the site.

Site 4

This is another grave site, indicated to me by Mr.de Villiers. The site could however not be located due to dense grass and tree cover (bluegums). Mr.de Villiers indicated the approximate position on a map of the area. When development commences this area should be scrutinized for the location of this and possibly other graves and it would then be included in the mitigation (possible exhumation/relocation) of the other graves in the area. According to Mr.de Villiers it is a stone paced grave.

Approximate GPS Location: **S26 04.254 E30 00.074**

A number of mitigation measures can be recommended:

1. The site can be fenced-off, cleaned and a buffer zone of 20m meters around it established to ensure that the site is not impacted/vandalized. This option will also entail the drafting and implementation of a Heritage Management Plan
2. The grave can be exhumed and relocated after the required processes regarding graves have been followed. Part of the process will include social consultation and the obtaining of permits from SAHRA and the Provincial Dept. of Health (a registered undertaker needs to handle this part of the process).

Cultural Significance: High.

Heritage Significance: Grade III. Other heritage resources of local importance and therefore worthy of conservation.

Field Ratings: General protection A (IV A). Site should be mitigated before destruction (high/ medium significance).

Mitigation: If impacted and can't be avoided then exhumation and relocation after following due process required by Law. Includes social consultation. Preferred mitigation though would be to fence-off, clean and manage

Probability of Impact: Probable

Duration of Impact: Long term

Scale of Impact: Site

Significance of Impact: High

Magnitude of Impact: High

During the field survey certain sections could not be accessed, but most of these areas were ploughed and under crops, and the possibility of locating sites here would be low. However, grave sites are sometimes found in areas such as these, and when development commences a lookout should be kept for these occurrences. Google Images of the study area shows that most of the area has been ploughed and planted. The location of farmsteads, farmworker dwellings and other farming related infrastructure is also shown. Although all possible efforts are made during surveys of this nature to identify and record cultural heritage resources in an area that will be impacted on by development, there is always a possibility of sites, features or objects being missed.



Figure 14: Location of study area indicating sites recorded and other farming related features located in the development footprint (Google Earth 2013 – Image date 2004).

7. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it is possible to say that the assessment of the portions of Vaalbult 3IT, located in the Gert Sibande District Municipality of Mpumalanga, around 13km from Carolina, was conducted successfully. The development of the Vaalbult Opencast Coal Mine (Vaalbult Project D011211) is being proposed.

Although no Stone Age sites and finds are known in and were recorded in the area it is always possible that Stone Age finds could be located close to the spruit that partially runs through the area, as well as close to the large pan situated in the northern corner of the study area. From an ecological point of view however these areas will be avoided by mining. Similarly no Iron Age sites, features or objects were recorded, although there are large numbers of sites in the larger geographical area.

All the sites recorded date to the more recent past (historical past) and included an old farmstead that has been altered extensively (no significance) and a number of graves older than 60 years of age. Graves are always of High Significance and would require suitable mitigation measures being implemented. The three grave sites recorded contain at least 7 graves in total although more graves could be found once dense grass cover is cleared away. Other unknown grave sites could be present in the area as well

The following is recommended:

1. The grave sites can be fenced-off, cleaned and a buffer zone of 20m meters around it established to ensure that the sites are not impacted/vandalized. This option will also entail the drafting and implementation of a Heritage Management Plan
2. The graves can be exhumed and relocated after the required processes regarding graves have been followed. Part of the process will include social consultation and the obtaining of permits from SAHRA and the Provincial Dept. of Health (a registered undertaker needs to handle this part of the process).
3. during any development activities, if any sites, features and objects of a cultural heritage (archaeological or historical) nature, are exposed, an expert should be called in to investigate and suitable mitigation measures are implemented. All development in these areas should be halted until the situation had been satisfactorily resolved.

The subterranean presence of archaeological and/or historical sites, features or artifacts are always a distinct possibility and this aspect needs to be kept in mind at all times. This could include unknown and unmarked burials.

8. REFERENCES

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APPENDIX A

DEFINITION OF TERMS:

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

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

Feature: A coincidental find of movable cultural objects.

Object: Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B

DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE:

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

APPENDIX C

SIGNIFICANCE AND FIELD RATING:

Cultural significance:

- Low A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.
- Medium Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.
- High Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

Heritage significance:

- Grade I Heritage resources with exceptional qualities to the extent that they are of national significance
- Grade II Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
- Grade III Other heritage resources of local importance and therefore worthy of conservation

Field ratings:

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

APPENDIX D

PROTECTION OF HERITAGE RESOURCES:

Formal protection:

National heritage sites and Provincial heritage sites – Grade I and II

Protected areas - An area surrounding a heritage site

Provisional protection – For a maximum period of two years

Heritage registers – Listing Grades II and III

Heritage areas – Areas with more than one heritage site included

Heritage objects – e.g. Archaeological, palaeontological, meteorites, geological specimens,
visual art, military, numismatic, books, etc.

General protection:

Objects protected by the laws of foreign states

Structures – Older than 60 years

Archaeology, palaeontology and meteorites

Burial grounds and graves

Public monuments and memorials

APPENDIX E

HERITAGE IMPACT ASSESSMENT PHASES

1. Pre-assessment or Scoping phase – Establishment of the scope of the project and terms of reference.
2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.
3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of Recommendation for Exemption – If there is no likelihood that any sites will be impacted.
5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.