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

**PHASE 1 HIA REPORT FOR THE VOSBREET BOERDERY  
PROPOSED NEW PIG FARM ON PORTIONS 6 & 10 OF  
THE FARM RENSBURGSLOOP 74IS  
NEAR BETHAL, MPUMALANGA**

For:

***Shangoni Management Services (Pty) Ltd  
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LYNNWOOD RIDGE  
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***Project Code: NEW-KWA-14-09-11***

**REPORT: APAC015/41**

by:

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***September 2015***

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A handwritten signature in black ink, appearing to be 'A. Pelser', is centered on the page.

## SUMMARY

APelser Archaeological Consulting (APAC) was appointed by Shangoni Management Services to conduct a Phase 1 HIA for the Vosbreet Boerdery's proposed new Pig Farm. Two areas (a Grower & Weaner Unit and Dry Sow and Farrowing Unit) had to be assessed. The development is located on Portions 6 & 10 of the farm Rensburgshoop 74IS, near Bethal, in the Gert Sibande District Municipality of Mpumalanga

Background research indicates that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. Although some archaeological material (Late Iron Age pottery) was found in the one section, this find is not significant and will not hamper the proposed development. The report discusses the results of both the background research and physical survey and provides a number of mitigation measures to minimize any possible negative impacts of the proposed development on any unknown heritage resources that could be located here and that was not identified during the assessment.

**Based on the findings of the HIA assessment it is therefore recommended that the proposed development be allowed to continue, taking into consideration the recommendations put forward at the end of the report.**

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## **1. INTRODUCTION**

APelser Archaeological Consulting (APAC) was appointed by Shangoni Management Services to conduct a Phase 1 HIA for the Vosbreet Boerdery's proposed new Pig Farm. Two areas (a Grower & Weaner Unit and Dry Sow and Farrowing Unit) had to be assessed. The development is located on Portions 6 & 10 of the farm Rensburgshoop 74IS, near Bethal, in the Gert Sibande District Municipality of Mpumalanga

Background research indicates that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. Although some archaeological material (Late Iron Age pottery) was found in the one section, this find is not significant and will not hamper the proposed development.

The client indicated the location and boundaries of the study area and the assessment concentrated on this portion.

## **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. 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 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<sup>2</sup> or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m<sup>2</sup>
- 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)**.

### **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

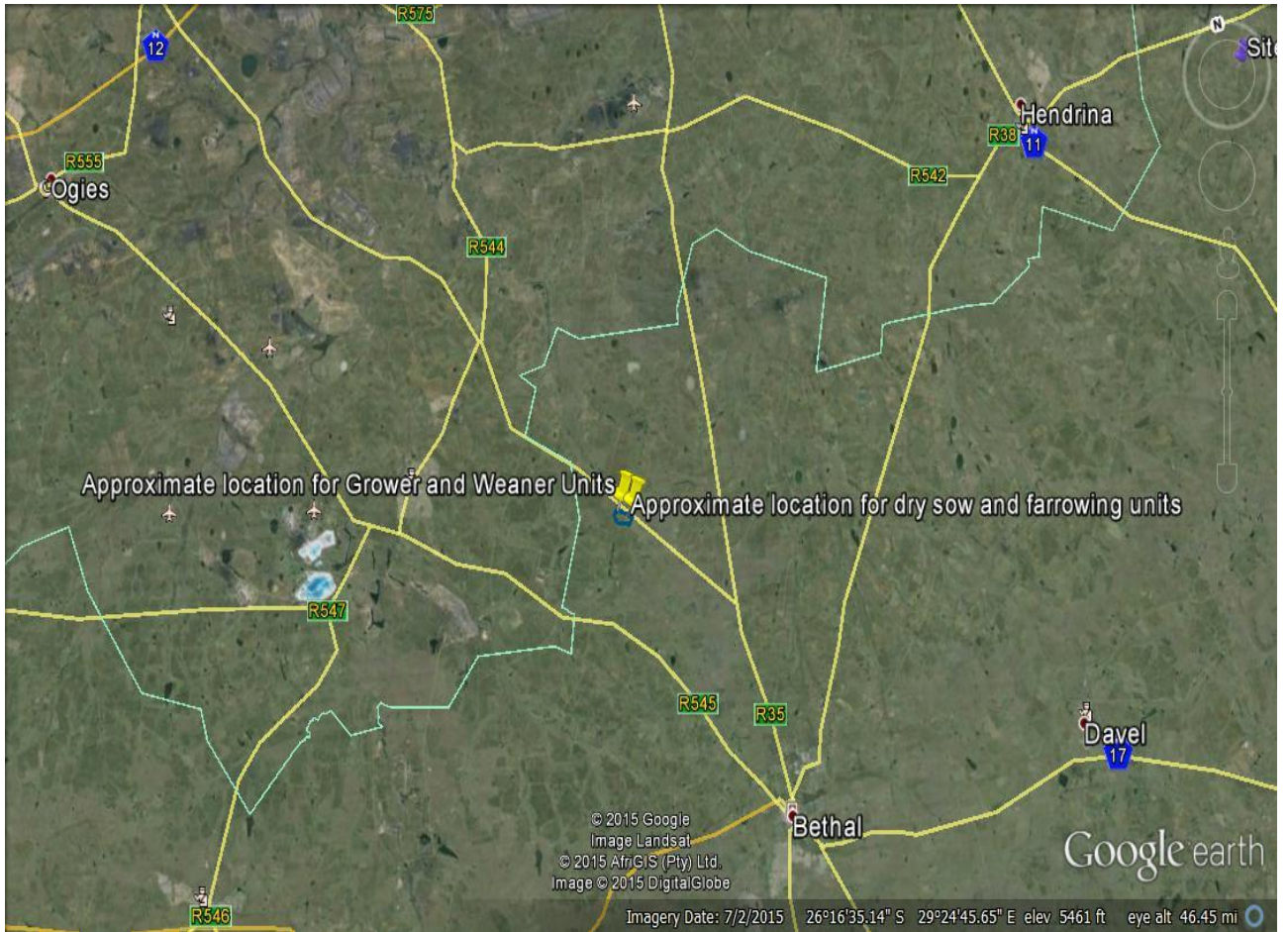
The Vosbreet Boerdery is located on the farm Rensburgshoop 74IS, a few kilometers north of the town of Bethal in the Gert Sibande District Municipality of Mpumalanga. The proposed development of the Grower & Weaner and the Dry Sow & Farrowing Units (Pig Farm) is situated on Portion 6 & 10 of the same farm.

The topography of the study area is relatively flat and open with rolling grass veld dominating, and with little or no ridges or outcrops. The soils are fairly turfy. During the assessment the grass cover in the one section (Dry Sow and Farrowing) was fairly dense, but visibility was still good, while the grass cover in the other section was burnt-down making visibility excellent. The study area has been disturbed in the past through agricultural activities (ploughing, grazing), while the erection of electrical pylons in the past also disturbed some portions. If any significant sites or features did exist here in the archaeological or historical past it would have been majorly disturbed or destroyed as a result.

The proposed development will be a Multi-site piggery with the following:

- Dry sow unit: 10 houses: 14m x 60m = 8 400m<sup>2</sup>
- Farrowing unit: 10 houses: 14m x 40m = 5 600m<sup>2</sup>
- Weaner unit: 10 houses: 14m x 40m = 5 600m<sup>2</sup>
- Grower unit: 14 houses: 12m x 130m = 21 840m<sup>2</sup>

The development footprint for the houses, with the two separate localities combined, is therefore approximately 4.1ha, but this excludes the access road, office, ablution facilities and open spaces. The total development footprint could therefore be closer to ±5ha.



**Figure 1: General location of study area.**



**Figure 2: A view of a section of the study area close to the Dry Sow & Farrowing Unit.**



**Figure 3: Another view of the same area showing the grass cover.**



**Figure 4: Some open areas do exist here as well.**



**Figure 5: A general view of the area at the Grower & Weaner Unit. It has been burnt and is open.**



**Figure 6: A view showing the old electrical lines running across the site.**



**Figure 7: Another view showing the general open and flat nature of the study area.**

## **6. DISCUSSION**

The Stone Age is the period in human history when lithics (or stone) was mainly used to produce tools. In South Africa the Stone Age can be divided basically into three periods. It is 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.

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.

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). A few pieces of undecorated pottery possibly dating to the LIA were identified in the study area. No related stone walling were however present. This aspect will be discussed further on in the document. The closest known Late Iron Age sites (to the author of this report) to the area is one at Wildbeestfontein near Kinross (excavated by Mike Taylor in 1979) and one excavated by Pelsler and others on the farm Rietfontein 101IS, close to Kriel (Pelsler et.al 2007: 1-24).

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 dagma 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, Sekhukhuneland, 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).

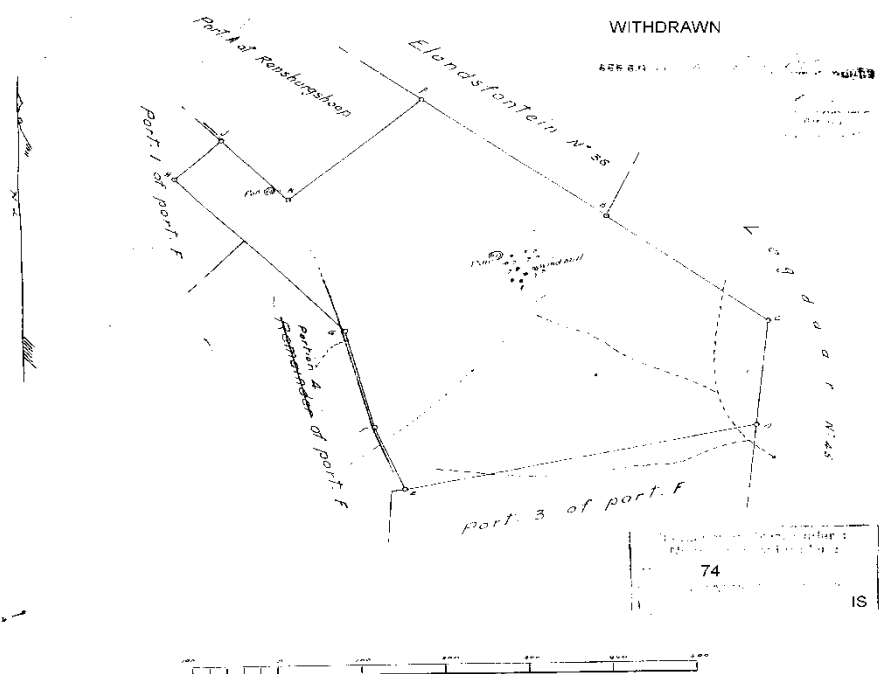
The oldest map for the farm (from the Chief Surveyor General Database [www.csg.dla.gov.za](http://www.csg.dla.gov.za)) dates to 1928 (for Portion 6), and indicates that at the time it was known as Rensburgshoop 39 (CSG Document 10GNON01). No sites or structures except for a windmill are shown. The 1947 map for Portion 10 indicates the Overhead Powerline seen in the assessment traversing the study area (CSG Document 10GNOZ01).



Form 58—Diagram Form for a Sub-Division of a Farm or portion of a Farm.

Exam<sup>n</sup> No. 2078 1928

SIDES	ANGLES	(y) CO-ORDINATES (x)
AB 271.181	A 103 20 30	A + 123.644 + 180.957
BC 232.481	B 172 34 40	B + 123.644 - 327.12
CD 141.29	C 120 19 40	C + 310.65 - 389.04
DE 428.02	D 108 2 10	D + 176.106 - 578.678
EF 32.40	E 100 57 50	E + 31.408 - 123.126
FG 136.35	F 171 44 0	F + 176.85 - 117.25
GH 290.52	G 203 18 20	G + 302.185 + 84.305
HJ 76.89	H 90 31 40	H + 520.108 + 112.991
KJ 18.533	J 30 0 20	J + 523.533 + 58.682
JK 208.464	K 265 42 10	K + 290.22 - 30.61



The above figure lettered A B C D E F G H J K represents  
330 Morgen 411 Square Rods of land, being portion 2 of portion F Part 6  
of the Farm Rensburgshoop N° 39 made in favour of  
according to Diagram A. No. 1276/28 relating to Deed of Amend. Title No. 74 dated  
11.5.1928 situated in the District of Bethal Province of the Transvaal. Bounded as indicated above.  
Ward Vaalkop Bethal  
The Reasons have been properly erected according to law.  
Surveyed in April & May 1928 by me as above Land Surveyor.

Approved \_\_\_\_\_  
Charles J. Mearns  
Surveyor-General.  
This diagram belongs to Deed of 74 made this day in favour of \_\_\_\_\_  
Registrar of Deeds.

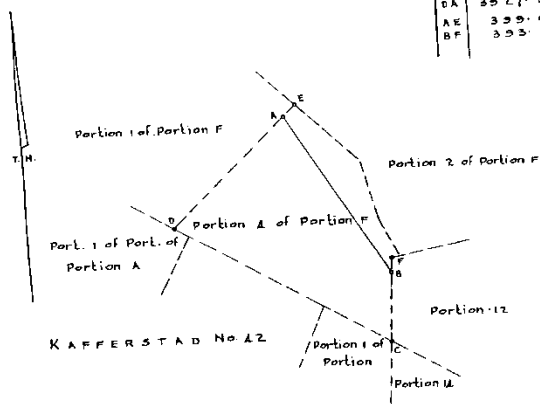
Published by authority: Geometrische Dienst, P.O. Box 100, Johannesburg, 1927

Figure 8: 1928 map of Portion 6 ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).

Surveyor-General

**DESCRIPTION OF BEACONS**  
 A B - 1/2" Iron pegs under cairns  
 C E - Iron standards under cairns  
 D - Iron standard and cairn 1.3 ft. South of fence  
 F - Iron standard under cairn at splayed fence corner

SIDES Cape Feet	ANGLES OF DIRECTION	CO-ORDINATES	
		SYSTEM	Y L <sub>25</sub> °
AB	4 850.7	331° 34'	10'
BC	1 853.0	A	A
CD	3 954.6	125	51
DA	3 927.6	224	28
AE	3 399.0	224	28
BF	3 953.8	184	A



The line lettered A B represents the centre line of an overhead Electric Power Line traversing Portion A of Portion F of the farm **RENSBURGSHOOP No. 39**

situate in the DISTRICT of **BETHAL** Surveyed in December 1947 by me

FRAMED FOR THE PURPOSE OF REGISTERING A SERVITUDE

This diagram is annexed to Deed of No. dated in favour of

The original diagram is No. A 311/25 annexed to Deed of Transfer No. 6886/1929 dated in favour of

Land Surveyor  
 S.G. File No.  
 Survey Records No.  
 Compilation No.  
 Lat. South Long. East

Figure 9: 1947 map of Portion 10 ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).

**Study Area Assessment**

During the assessment two areas (Weaner and Grower Units & Dry Sow and Farrowing Units) had to be covered. The Weaner and Grower Unit area is situated in a section that contains old ploughed agricultural fields. Although grass cover was relatively dense, visibility was not poor. No cultural heritage (archaeological or historical) sites, features or objects were identified during the assessment.

The assessment of the Dry Sow & Farrowing Units area did reveal some archaeological material. This was in the form of a number of small fragments of undecorated pottery typical of the Late Iron Age (LIA). These were located on three areas (containing 5 pieces in total) on the site, and close to some of the overhead electrical pylons. No associated features normally found with artifacts such as these, such as stone walled features that would include cattle kraals and hut enclosures, were identified here and in the larger study area. If indeed these did exist here in the past then recent historical agricultural activities and the erection of the overhead electrical pylons that traverse the area would have resulted in the disturbance and almost total destruction of these features. The pieces of pottery are therefore out of any archaeological context and insignificant in terms of Heritage value.

No further mitigation is necessary.

The pottery scatters were located at the following positions:

(a) S26 17 41.50 E29 23 27.20 (1 piece); (b) S26 17 40.70 E29 23 26.90 (3 pieces) & (c) S26 17 40.50 e29 23 27.70 (1 piece)

Based on the heritage assessment it is therefore recommended that, from a Cultural Heritage perspective, the proposed development be allowed to continue.



**Figure 10: One of the undecorated pieces of pottery.**



**Figure 11: Another of the pottery fragments.**



**Figure 12: Aerial view showing location of the two units that had to be assessed. The white lines are the tracks followed by the specialist, with the red dots indicating the location of the LIA pottery finds (Google Earth 2015).**

## **7. CONCLUSIONS AND RECOMMENDATIONS**

In conclusion it is possible to say that the Phase 1 HIA for the Vosbreet Boerdery's proposed new Pig Farm was conducted successfully. The development is located on Portions 6 & 10 of the farm Rensburgshoop 74IS, near Bethal, in the Gert Sibande District Municipality of Mpumalanga.

Background research indicates that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. **Although some archaeological material (Late Iron Age pottery) was found in the one section, this find is not significant and will not hamper the proposed development.**

The area has been extensively disturbed in the recent past through agricultural activities, as well as the erection of Overhead Electrical Lines traversing a section of the study area. If any sites did exist here in the past it would have been disturbed or destroyed to a large degree.

**From a cultural heritage point of view the development should therefore be allowed to continue. However, the subterranean presence of archaeological or historical sites, features or objects is always a possibility. Should any be uncovered during the development process and archaeologist should be called in to investigate and recommend**

**on the best way forward. The presence of other low stone packed or unmarked graves should also be kept in mind.**

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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.