

Comprehensive and Professional Solutions for all Heritage Related Matters  
**CK 2006/014630/23** **VAT NO.: 4360226270**

**PHASE 1 HIA REPORT FOR THE PROPOSED  
TOPIGS SA MERINO PIGGERY PROJECT  
ON THE REMAINING EXTENT OF MERINO 641IR,  
DIPALESENG LOCAL MUNICIPALITY, MPUMALANGA**

For:

***Shangoni Management Services (Pty) Ltd  
P.O.Box 74726  
LYNNWOOD RIDGE  
0040***

***Project Code: TOP-VIL-14-04-09***

**REPORT: APAC015/12**

by:

***A.J. Pelser  
Accredited member of ASAPA  
Professional Member of SASCH***

***First Version March 2015  
Revised Version May 2015***

**P.O.BOX 73703  
LYNNWOOD RIDGE  
0040  
Tel: 083 459 3091  
Fax: 086 695 7247  
Email: [pelseranton@gmail.com](mailto:pelseranton@gmail.com)**

Member: AJ Pelser BA (UNISA), BA (Hons) (Archaeology), MA (Archaeology) [WITS]

**©Copyright**

**APELSER ARCHAEOLOGICAL CONSULTING**

**The information contained in this report is the sole intellectual property of APELSER Archaeological Consulting. It may only be used for the purposes it was commissioned for by the client.**

**DISCLAIMER:**

**Although all efforts are made to identify all sites of cultural heritage (archaeological and historical) significance during an assessment of study areas, the nature of archaeological and historical sites are as such that it is always possible that hidden or subterranean sites, features or objects could be overlooked during the study. APELSER Archaeological Consulting can't be held liable for such oversights or for costs incurred as a result thereof.**

**Clients & Developers should not continue with any development actions until SAHRA or one of its subsidiary bodies has provided final comments on this report. Submitting the report to SAHRA is the responsibility of the Client unless required of the Heritage Specialist as part of their appointment and Terms of Reference**

## SUMMARY

A Pelser Archaeological Consulting (APAC) was appointed by Shangoni Management Services, on behalf of Topigs (SA), to conduct a Phase 1 HIA on the Portion 0 (the Remaining Extent) of the farm Merino 641IR, in the Dipaleseng Local Municipality of Mpumalanga, for the proposed Merino Piggery Project.

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 portion falls. The assessment of the specific study area recorded a number of sites and features of archaeological & recent historical origin and significance. The report discusses the results of both the background research and physical survey and provides a number of mitigation measures to minimize the possible negative impacts of the proposed development on these resources.

**However, it is recommended that the proposed development be allowed to continue, taking into consideration the recommendations put forward at the end of the report.**

# CONTENTS

	page
SUMMARY .....	3
CONTENTS.....	4
1. INTRODUCTION .....	5
2. TERMS OF REFERENCE .....	5
3. LEGISLATIVE REQUIREMENTS.....	5
4. METHODOLOGY .....	8
5. DESCRIPTION OF THE AREA.....	9
6. DISCUSSION.....	13
7. CONCLUSIONS AND RECOMMENDATIONS .....	26
8. REFERENCES .....	26
APPENDIX A – DEFINITION OF TERMS .....	28
APPENDIX B – DEFINITION/ STATEMENT OF SIGNIFICANCE.....	29
APPENDIX C – SIGNIFICANCE AND FIELD RATING.....	30
APPENDIX D – PROTECTION OF HERITAGE RESOURCES.....	31
APPENDIX E – HERITAGE MANAGEMENT IMPACT ASSESSMENT PHASES.....	32

## **1. INTRODUCTION**

A Pelser Archaeological Consulting (APAC) was appointed by Shangoni Management Services, on behalf of Topigs (SA), to conduct a Phase 1 HIA on the Portion 0 (the Remaining Extent) of the farm Merino 641IR, in the Dipaleseng Local Municipality of Mpumalanga, for the proposed Merino Piggery Project.

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 portion falls. The assessment of the specific study area recorded a number of sites and features of archaeological & recent historical origin and significance.

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 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.

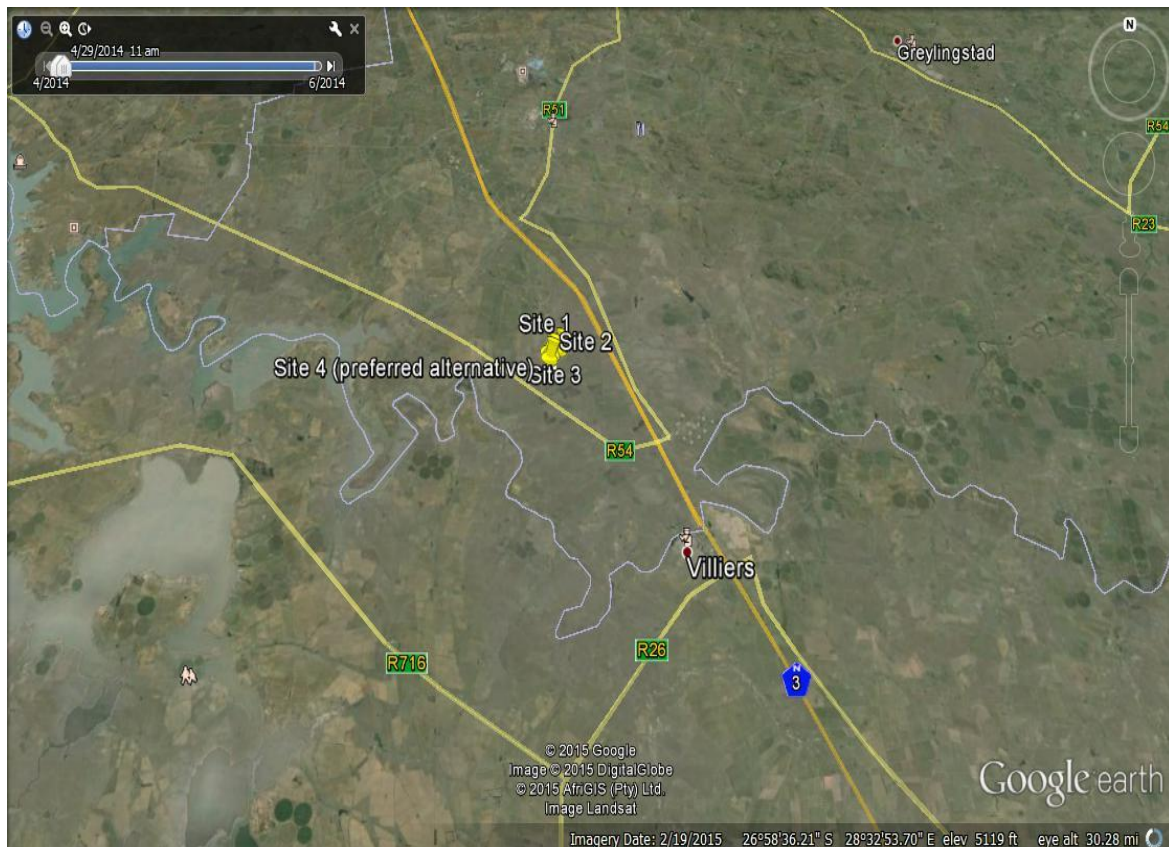
#### 4.4 Documentation

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.

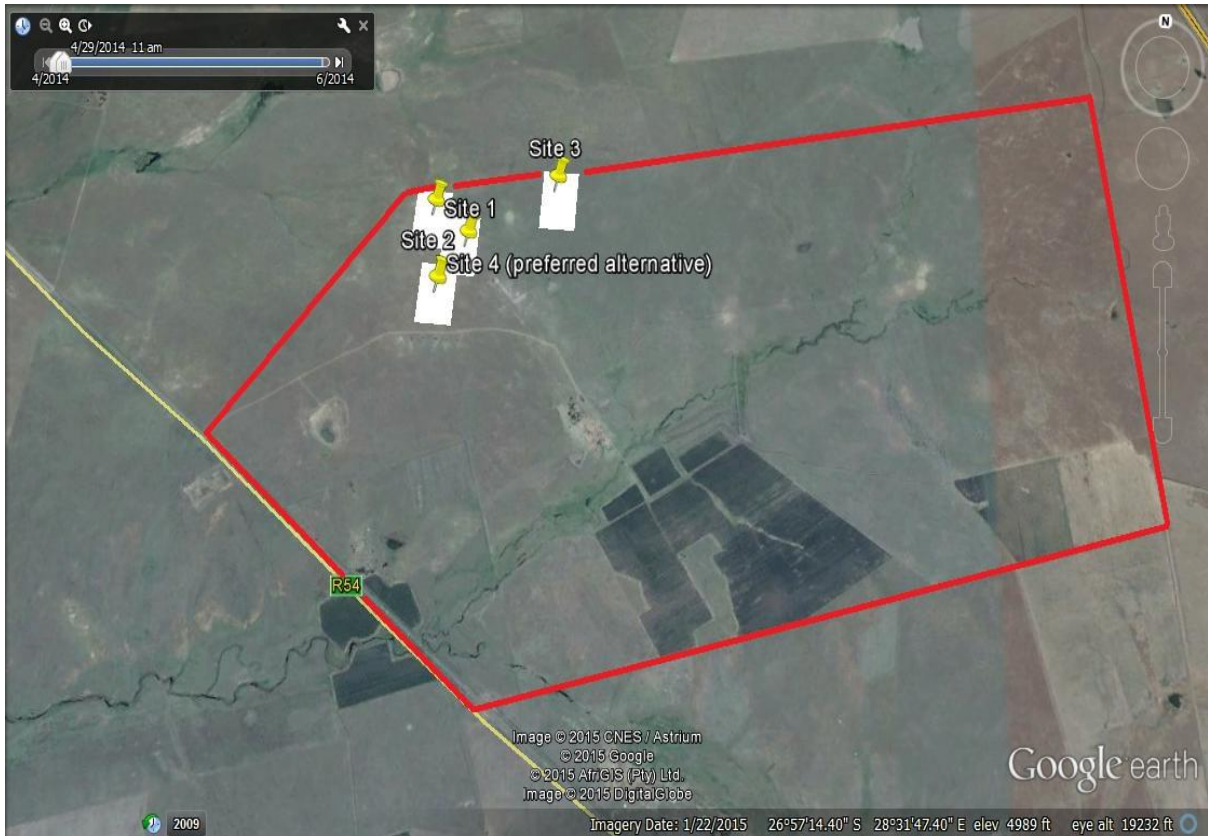
### 5. DESCRIPTION OF THE AREA

The study area is located on Portion 0 (the Remaining Extent) of the farm Merino 641IR, in the Dipaleseng Local Municipality, near Villiers. The land parcel was used mainly for agricultural purposes in the recent historical past.

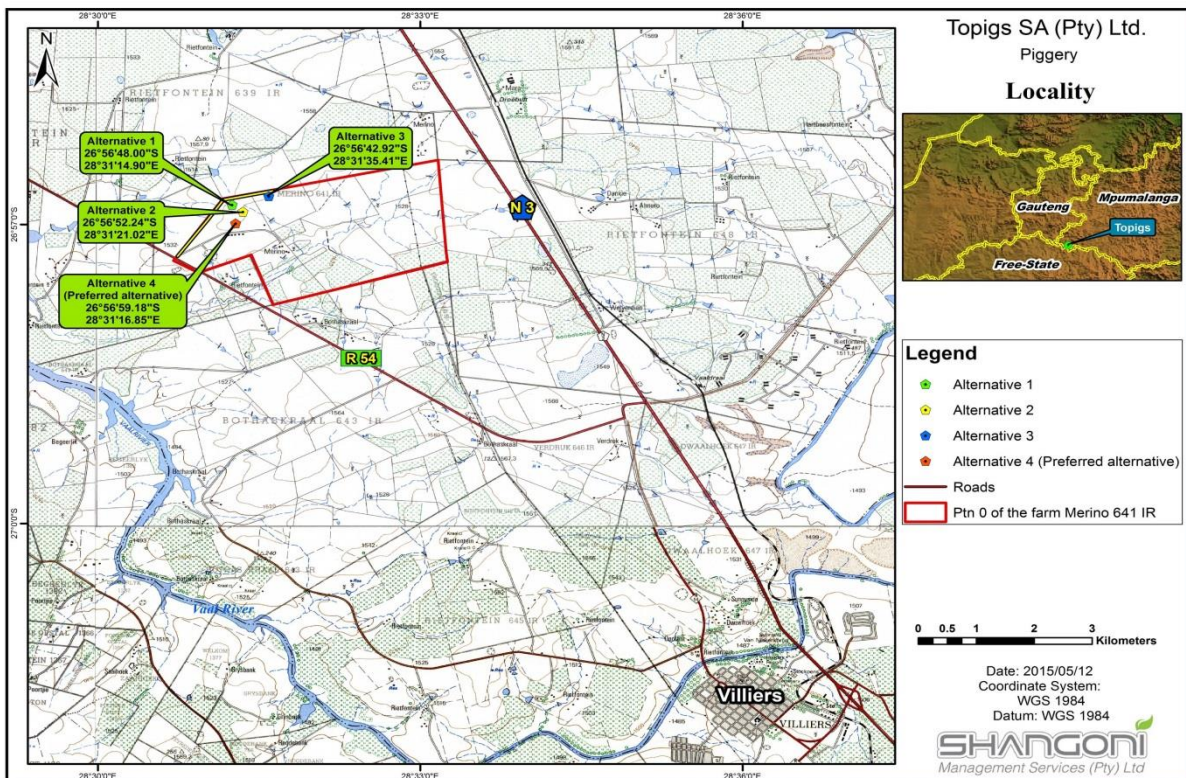
The topography of the study area is relatively flat, rolling grassveld, although a low rocky ridge is located on the northern/northeastern boundary of the study area. A section of the land is characterized by a wetland and will be avoided by the development. Visibility during the assessment was good, with grass cover low and no tree cover present. A representative of the client (Topigs SA) accompanied the heritage specialist to the preferred site for the Merino Piggery, and indicated the location and positioning of the development and its related structural elements.



**Figure 1: General location of study area showing the Project Alternatives (Google Earth 2015).**



**Figure 2: Closer view of study area footprint, showing approximate position of Project Alternative sites for the Merino Piggery (Google Earth 2015).**



**Figure 3: Location map showing study area, as well as alternative positions of proposed development (courtesy Shangoni).**





**Figure 4: One view of study area. The topography is mainly flat, rolling grassveld, with no tree cover present.**



**Figure 5: A section of the study area close to the preferred positions for the development is characterized by a low rocky ridge.**

## 6. DISCUSSION

From a cultural heritage (archaeological & historical) point of view the area is not well known, although this might just be the result of a lack of detailed, focused research. Only one report related to the larger Villiers area was found in the database of the South African Heritage Resources Agency (SAHRIS). This is an AIA done by Van Der Walt in 2008.

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).

There are no known Stone Age sites in the area, although a few individual stone tool flakes were identified in the study area during the 2015 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.

T. Maggs did extensive archaeological research in the area along the Vaal and he identified several Iron Age settlements in the larger area referred to by archaeologists as Type V and Type N settlements. These settlements are classified mainly on the difference in layout of the stone walled settlements. These settlements date to approximately AD 1450 to AD 1820 (Van der Walt 2008: 18-19).

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).

Some Iron Age occurrences were identified during the assessment and will be discussed in more detail further on in the report. This includes remnants of stone walled settlements and some rock engravings that could be related to the Iron Age, and is similar to rock art features identified by Van der Walt in 2008 on farms close to the town of Villiers (2008: p.26; 29).

The historic timeframe intermingles with the later parts of the Stone and Iron Age, and can loosely be regarded as times when written and oral recounts of incidents became available. The town of Villiers was named after Lourens de Villiers. The town was established in 1882 on the farms of Pearson Valley and Grootdraai and became a municipality in 1917. Stonehouse, today a 4-star guesthouse is one of the oldest houses still in existence in the town and was built in 1911. According to Berg (1999) the first railway in Villiers was built between 1920 and 1930 servicing Villiers, Grootvlei and Balfour North (Van der Walt 2008: 19).

The oldest map for the farm Merino 641IR that could be obtained from the database of the Chief Surveyor General dates to 1918 ([www.csg.dla.gov.za](http://www.csg.dla.gov.za) – CSG B16029). No historical or earlier sites or features are shown on this map in the study area.

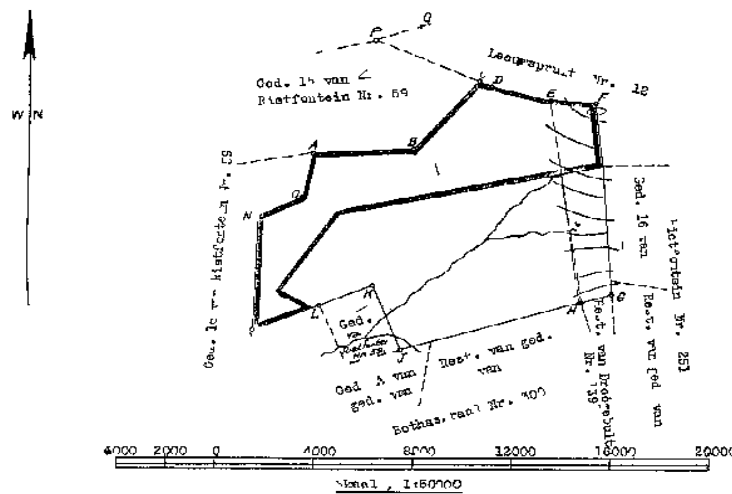
A cemetery with a number of unknown graves were identified in the study area, while the current farmhouse with related structures are also situated in the larger development area although these are younger than 60 years of age and will not be negatively impacted.

The results of the field assessment will be discussed in the next section.

L. N. A 8961/48  
 Geod. L. N. A  
 Landmeter-Generaal.

- Beskrywing van Dakens.
- A. Ysterpen 6' bo die grond in konkreet
  - B. Klippaal 7 vt. hoog
  - C. Ysterpen gelyk met grond 1 vt. hoog, noor-oos van Klippaal 5 vt. hoog.
  - D. Spoorstaaf 4 vt. hoog.
  - E. Westekant van Klippaal 5 vt. hoog.
  - M.N.O. Ysterpenne onder klipstapels.
  - P. Ysterpaal 4 vt. hoog met verskerings-pennas op 16 vt. afstand langs die pennislyne PQ en RQ.

SIE		HOEK	
Kaap	Voet		
AD	4027.1	A	104.07.80
B	4174.6	B	178.13.30
C	629.7	C	107.15.30
DE	2474.2	D	187.12.70
EF	1864.8	E	182.54.40
FG	884.3	F	98.00.10
GH	1283.3	G	107.13.10
HJ	7682.3	H	179.65.80
I	3146.6	I	98.35.40
KL	2448.4	K	272.49.80
L	2948.9	L	167.09.70
MP	5178.0	M	66.16.10
NO	1994.5	N	118.24.70
OP	2110.3	O	231.86.70
	Konneksie		Data
CP	4088.6	CP	180.70.00



... is geregistreer onder:  
 Now registered under:  
 No. 641  
 REGISTRASIE AFDELING  
 REGISTRATION DIVISION

- Die figuur A.B.C.D.E.F.G.H.I.J.K.L.M.N.O. stel voor 1309.7384 borge grond synde die plaas IR 140 op bo+ van uit
- Figuur A.B.C.D.E.H.J.K.L.M.N.O. synde die Restant van die Suid Oostelike, oede lte. van Rietfontein Nr. 59 1864/12/7 5417 Borge volgens kaart Ir. 545/1882
  - Figuur F.G.H.I.J.K.L.M.N.O. synde lte. lte. van gedeelte van Broogseult Nr. 158 6/10/1860 Borge 438 vt. Roads volgens kaart L.G. Nr. A 1001/20 gehag am. Akt. van Transport Nr. 12198/1873.

... in die Distrik Heidelberg, Provinsie Oranjestad.  
 ... in November 1948  
 L. N. A

Hierdie kaart is gehag aan Sertifikaat van gekonsolideerde Titel Nr. <u>15766/57</u> gedatums ter gunste van Registratere van Aktes.	Die bestaande kaart is nou in die beskerwing aan ehaal.	L. N. A Nr. 13320/17725/1 Meetstapels Nr. 104/104 Kaspliasie Nr. 719 Suidel. breedte Oos. lengte
--	---	---

Figure 6: 1918 map of the farm ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).





**Figure 7: Partial view of the homestead on Merino.  
The homestead and related buildings are younger than 60 years of age  
& will be utilized as part of the farm management offices and for storage purposes.**



**Figure 8: View of some of the other outbuildings.**

## Study Area Assessment

A number of sites, features and objects (cultural material) were identified and recorded during the assessment of the study area. Although a specific section is earmarked for the proposed development actions, a wider area was surveyed as well.

The preferred alternatives for the Livestock Unit (Piggery) is on a flat section of the study area (See Google Map), away from the wetlands part in the central portion of the area and clear of any drainage issues. Four Alternative Sites were identified for the location of the Piggery, with the archaeological sites identified located in close proximity to these. Alternative 4 is the most preferred site and will impact on Iron Age sites and features located here

### Site 1 – Cemetery

The site consists of approximately 10 unknown graves, demarcated by cement and brick borders. None of the graves have headstones with inscriptions, but it is believed to be the burials of farmworkers in the area. The site is situated outside of the area of the preferred location of the Livestock Unit and will therefore not be impacted directly.

**GPS Location:** S26 56 43.50 E28 31 26.60

**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 IIIA: should be included in the heritage register and not be mitigated (high significance)

**Mitigation:** Protect & fence-in. Access to site should be provided to potential descendants/living relatives. Manage.



**Figure 9: Site 1 Cemetery.**





**Figure 10: One of the graves on Site 1.**

### **Sites 2 & 3 – Archaeological Zones 1 & 2**

Although a number of features, including remnants of LIA stone walled enclosures (forming individual settlement units or homesteads) as well as a number of rock engravings, were identified, these sites basically comprise two distinct archaeological areas or zones (See Google Map) in the study area. If these areas could not be avoided by the development actions, suitable mitigation measure must be implemented.

The stone walling consists of circular enclosures (the remains of cattle kraals), surrounded by the remnants of surrounding walls with hut bays. It is (at this stage) not possible to determine settlement type, but it most likely conforms to Maggs's Type N (Ntsuanatstasi) settlements. Decorated pottery found on the sites seems to be related to the Ntsuanatstasi facies of the Urewe pottery tradition as well, with bands of stamped decoration in the neck of the vessel and stamped arcades on the shoulder. Sometimes these are found in combination with red ochre bands. The pottery dates these sites to between AD1450 & AD1650 (Huffman 2007: 167-169). Other cultural material found on these sites includes both upper and lower grinding stones, as well as faunal remains (animal bones), while ash midden areas were also identified in some locations.

The rock engravings found in Archaeological Zone 2 are similar to ones found by Van der Walt in 2008 close to Villiers. The rock engravings are on individual boulders on the site and consist of single or multiple geometric patterns and possible (unidentified) animal figures. The relationship of these engravings with the stone walled settlements is not known at this stage, but could possibly date to the same period. Some of the geometric patterns seem to be impressions of the settlement features they are located in. According to Dr. Ben Smith, a Rock art specialist who looked at photographs of the engravings found by Van der Walt confirmed

that they are indeed engravings and that they looked recent, but not new. He thought at the time that they are not related to the San and that the engravings are younger than a hundred years (Van der Walt 2008: 29). This can however not be confirmed.

The archaeological sites and features are deemed to be of medium to high significance, and should not be disturbed or negatively impacted on by the development. The possibility of unmarked burials located on these sites is also a high likelihood and any development actions on the sites should be avoided. With the archaeological sites situated in relatively close proximity to the development suitable mitigation measures need to be implemented, including the fencing-in and management of the sites through a Cultural Heritage Resources Management Plan. If there is no way in avoiding the sites then detailed Archaeological Research, including the mapping and excavation of the sites needs to be undertaken.

**Preferred Alternative 4 has been chosen by the client (Topigs) for the development of their Piggery as it will have the least impact on the water courses/wetlands and will also result in less disturbances during the construction phase of the project, including the Cultural Heritage (archaeological) sites. However, with clear impact on a section of the Iron Age settlement features, it is has been decided to implement archaeological mitigation measures. This will include detailed mapping of all the sites and features, as well as archaeological excavations in these areas (Archaeological Zone 2). Once this has been completed a destruction permit will be applied for in order for the development to continue. The archaeological sites and features in Archaeological Zone 1 will not be impacted.**

**GPS Locations:** S26 56 41.70 E28 31 27.50 (Site 2 - Archaeological Zone 1); S26 56 48.00 E28 31 14.90 (Site 3 – Archaeological Zone 2)

**Cultural Significance:** Medium to High

**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) OR General protection A (IV A): Site should be mitigated before destruction (High/Medium significance)

**Mitigation:** Archaeological Mapping & Excavations needs to be conducted before demolition (For Preferred Alternative 4 in Archaeological Zone 2). Avoid Archaeological Zone 1 Sites.



**Figure 11: A view of the low rocky ridge on which Archaeological Zone 1 is located.**



**Figure 12: A view of a section of Archaeological Zone 2.**





**Figure 13: One of the smaller stone circles in Zone 1.**



**Figure 14: An upper grinder.**



**Figure 15: A view of some of the stone walling in Zone 1.**



**Figure 16: Pottery found in Zone 1.**





**Figure 17: One of the engraved rocks in Archaeological Zone 1.  
Note the geometric patterns.**



**Figure 18: The foundations of a stone wall in Archaeological Zone 2.**



**Figure 19: Pottery and animal bones from Zone 2.**

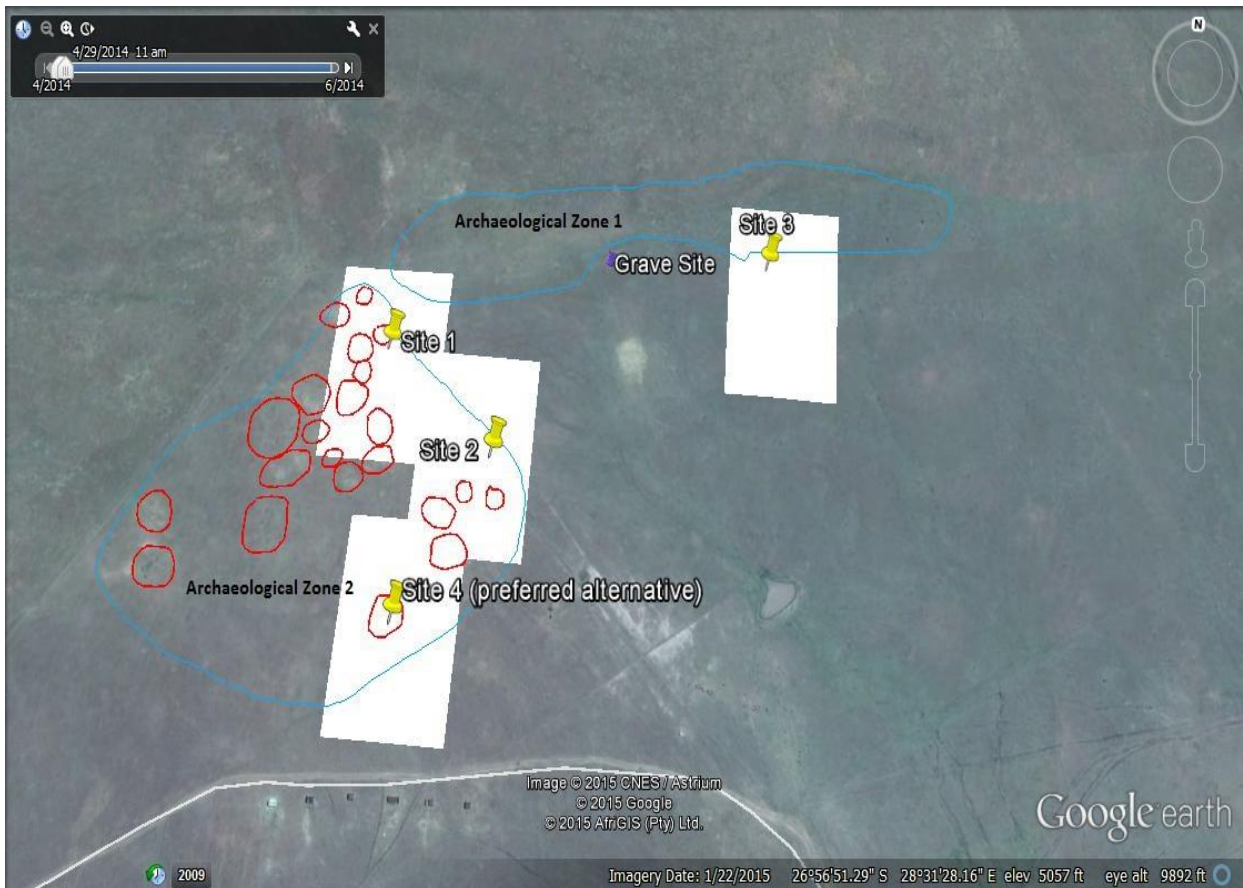


**Figure 20: More decorated pottery from Zone 2.**





**Figure 21: View of one of the ash middens/kraals in Archaeological Zone 2.**



**Figure 22: Aerial view showing archaeological sites/zones in relation to Preferred Site Alternatives (Google Earth 2015).**



## 7. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it is possible to say that the Phase 1 HIA on the Portion 0 (the Remaining Extent) of the farm Merino 641IR, in the Dipaleseng Local Municipality of Mpumalanga, for the proposed Merino Piggery Project, was conducted successfully. A number of sites and features, as well as cultural material related to the LIA, were identified during the survey. This includes stone walled enclosures such as cattle kraals and hut bays, as well as ash middens and rock engravings, located in two distinct but related Archaeological Zones. Cultural material identified included pottery, faunal remains and upper and lower grinding stones. A recent grave site containing at least 10 unknown graves were identified also.

Preferred Alternative 4 has been chosen by the client (Topigs) for the development of their Piggery as it will have the least impact on the water courses/wetlands and will also result in less disturbances during the construction phase of the project, including the Cultural Heritage (archaeological) sites. However, with clear impact on a section of the Iron Age settlement features, archaeological mitigation measures needs to be implemented, and the client has accepted these actions. This will include detailed mapping of all the sites and features, as well as archaeological excavations in these areas (Archaeological Zone 2). Once this has been completed a destruction permit will be applied for in order for the development to continue. The archaeological sites and features in Archaeological Zone 1 will not be impacted (situated at/close to the Client's Alternatives Site 3). Alternatives 1 & 2, although not the preferred development options for ToPigs, will also impact on the archaeological sites & features in Archaeological Zone 2 should these alternatives be chosen. The mitigation measures that will be implemented for Alternative 4 will cover these alternatives as the archaeological mapping and excavation will cover the complete Archaeological Zone 2.

It is recommended that the grave site be fenced-in to protect it, while access to the site for potential visitors (descendants/living relatives) should still be provided.

**From a cultural heritage point of view the development should however be allowed to continue taking cognizance of the above. Furthermore, the subterranean presence of archaeological or historical sites, features or objects is always a possibility. Should any be uncovered during the development process an 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.**

## 8. REFERENCES

Aerial views of study area, site distribution and Location of Study Area and Project Alternatives: Google Earth 2015 & Shangoni Environmental

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

Huffman, T.N. 2007. Handbook to the Iron Age: **The Archaeology of Pre-Colonial Farming Societies in Southern Africa**. Scottsville: University of KwaZulu-Natal Press.

Knudson, S.J. 1978. **Culture in retrospect**. Chicago: Rand McNally College Publishing Company.

Lombard, M., L. Wadley, J. Deacon, S. Wurz, I. Parsons, M. Mohapi, J. Swart & P. Mitchell. 2012. **South African and Lesotho Stone Age Sequence Updated (I)**. South African Archaeological Bulletin 67 (195): 120–144, 2012.

Maggs, T.M. OC. 1976. **Iron Age Communities of the Southern Highveld**. Natal Museum, Pietermaritzburg.

Van der Walt, J. 2008. **Archaeological Impact Assessment: SUBDIVISION 1 OF THE FARM ALLEMANSHOME 46, THE FARM ONVERWACHT, AND A PORTION OF THE FARM VILLIERS 492, DISTRICT VILLIERS, FREESTATE PROVINCE**. Unpublished Report Heritage Contracts Unit Wits University. For: Vaalplan Town & Regional Planners. November 2008.

Republic of South Africa. 1999. **National Heritage Resources Act** (No 25 of 1999). Pretoria: the Government Printer.

Republic of South Africa. 1998. **National Environmental Management Act** (no 107 of 1998). Pretoria: The Government Printer.

Chief Surveyor General Database ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)): Document B16029

**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.