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Archaeos Culture & Cultural
Resource Consultants
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**A REPORT ON A HERITAGE IMPACT ASSESSMENT
FOR A PROPOSED STORAGE FACILITY DEVELOPMENT
PORTION 72 OF THE FARM BULFRONTEIN 533 JQ,
NEAR IANSERIA, GAUTENG**

For:

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SUMMARY

Archaeos cc was requested by JW Environmental Solutions (Pty) Ltd to conduct a Heritage Impact Assessment for a proposed development of a Storage Facility and Parking area for heavy machinery on Portion 72 of the farm Bulfontein 533 JQ near Lanseria in Gauteng. A Iha area will be utilized for this purpose, with the exact area not chosen yet.

The area has been fairly extensively disturbed in the recent past by rural/urban developments, agricultural activities, as well as some (informal) residential dumping. However, although there has been some disturbance, a number of sites of some cultural heritage significance were recorded during the site assessment. These sites are discussed in the report, while recommendations regarding the mitigation of impacts on these sites are given at the end of this document.

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 continuing of the proposed development.

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1. INTRODUCTION

Archaeothos cc was requested by JW Environmental Solutions (Pty) Ltd to conduct a Heritage Impact Assessment for a proposed development of a Storage Facility and Parking area for heavy machinery on Portion 72 of the farm Bulfontein 533 JQ near Lanseria in Gauteng. A 1ha area will be utilized for this purpose, with the exact area not chosen yet.

The area has been fairly extensively disturbed in the recent past by rural/urban developments, agricultural activities, as well as some (informal) residential dumping. However, although there has been some disturbance, a number of sites of some cultural heritage significance were recorded during the site assessment. These sites include a number of homestead remains.

The client indicated the boundaries of the area that will be affected by the development and the assessment was to be confined to this.

2. TERMS OF REFERENCE

The Terms of Reference for the survey were to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located in the area of 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, should this be applicable.
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 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 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)**.

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 literature was undertaken in order to place the development area in an archaeological and historical context. The sources consulted in this regard are indicated in the bibliography.

4.2 Field survey

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

The survey was undertaken mainly on foot, although certain portions were traversed by vehicle.

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 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 development area is located on Portion 72 of the farm Bultfontein 533 JQ near Lanseria, Gauteng Province. The development will entail a Storage Facility and Parking area for heavy machinery. A 1ha area of the farm will be utilized for these purposes, with the specific area not yet decided on.

The area is located on a low ridge and is characterized by fairly open grassveld. Very little tree cover exists. The area has been disturbed in the past through some agricultural activities (ploughing visible), rural residential and other developments. Informal residential dumping has also taken place to some degree. The 1:50 000 topographic map of the area (2527DD Broederstroum) dating to 2001 indicates very little agricultural activity, while ruins and other structures/homesteads in the area are shown on this map. No grave sites or other historical features are indicated. The area is also currently being used for cattle grazing by local residents.



Figure 1: Site Locality Map (courtesy JW Environmental Solutions (Pty) Ltd).

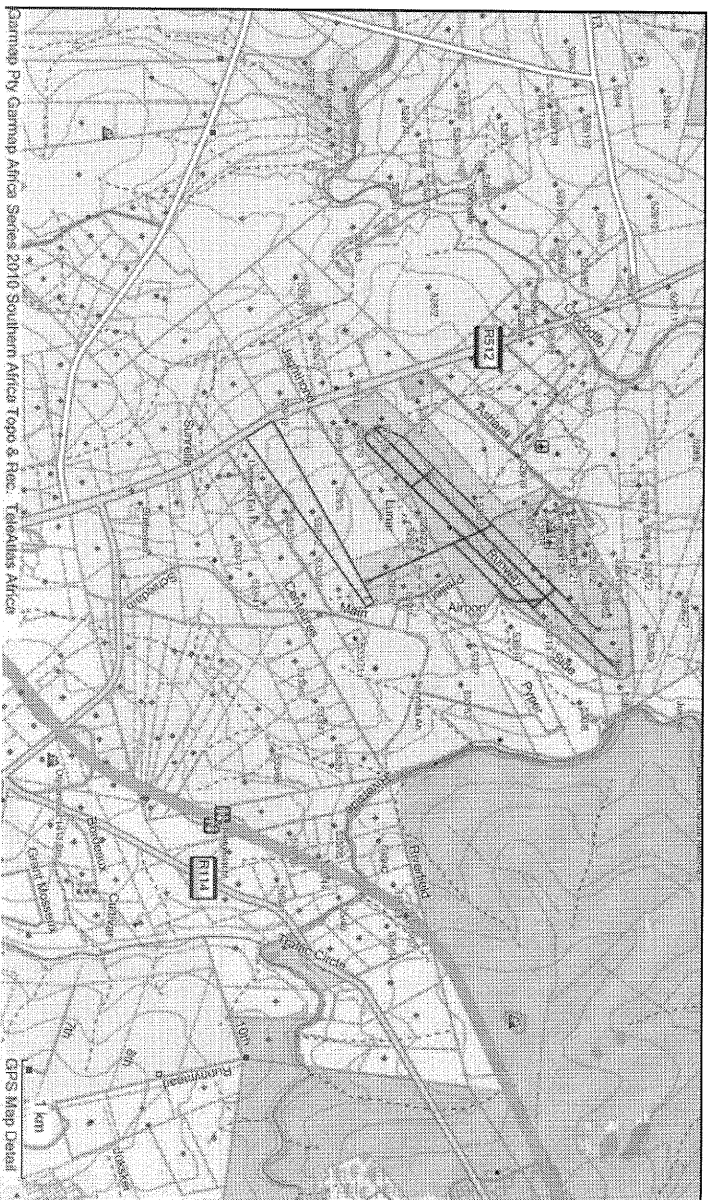
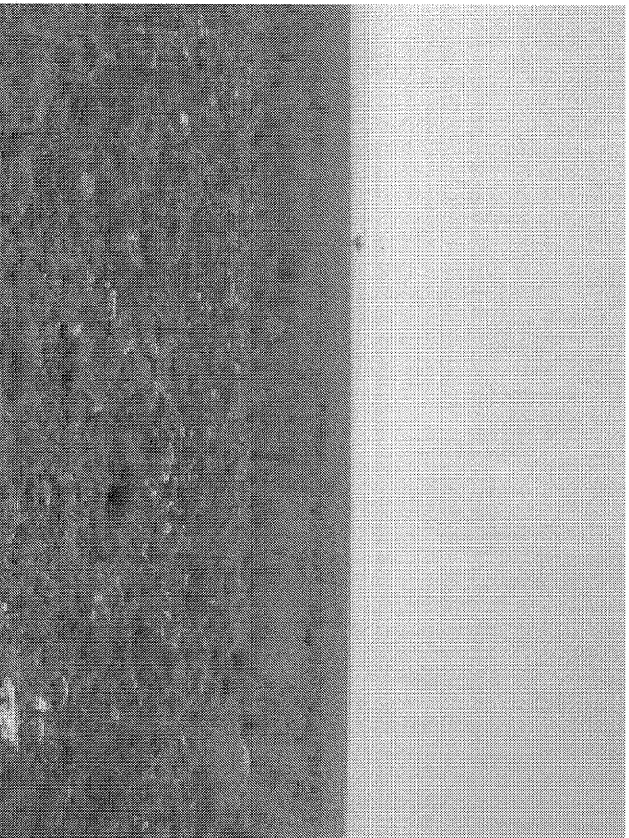


Figure 2: Topographic map of location.

Note the close proximity to Lanseria airport (Map Source 2010).



**Figure 3: General view of area.
Note the open grass veldt and sparse tree cover.**

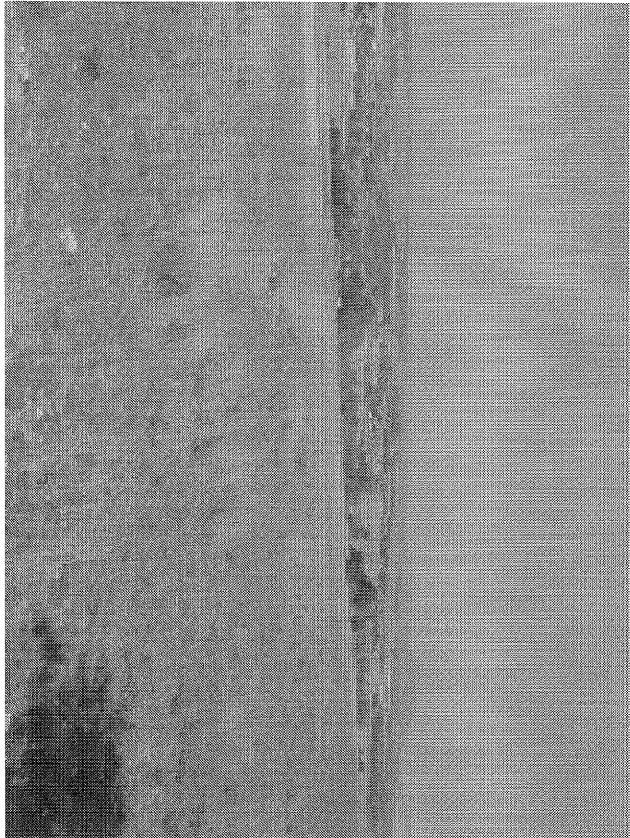


Figure 4: Another general view of the area.

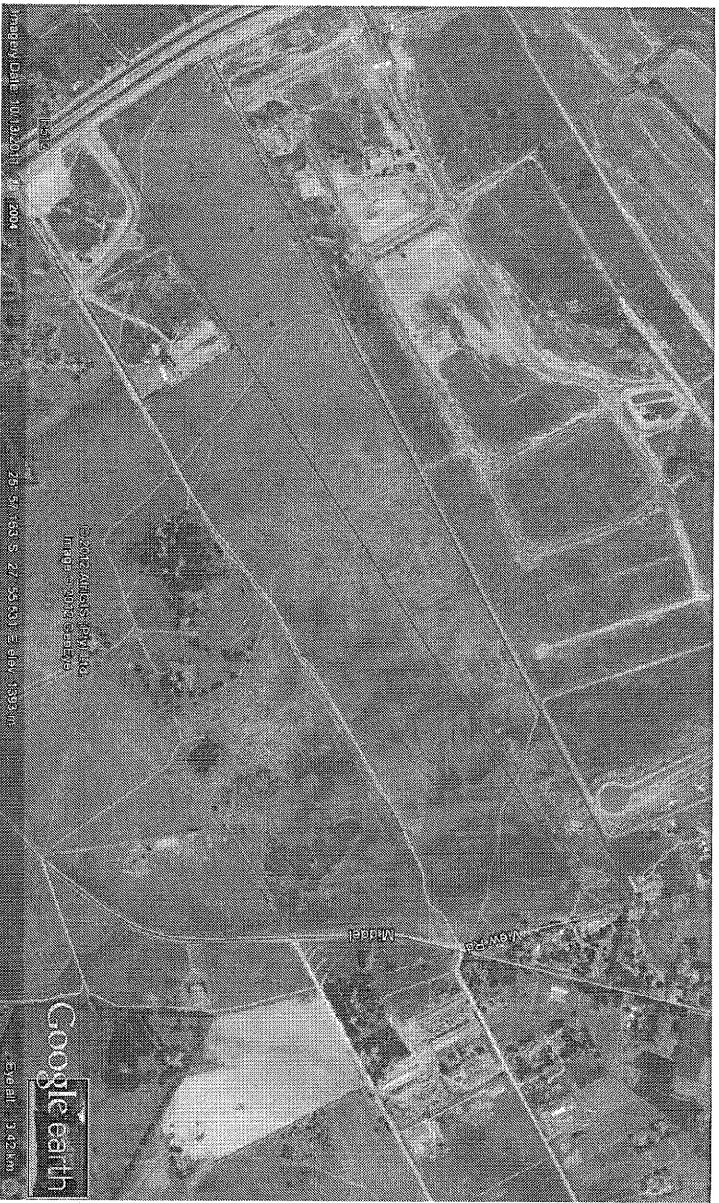


Figure 5: Closer aerial view of site. Note the ploughed furrows in certain sections (Google Earth 2011).

6. DISCUSSION

A short, general, background to the archaeology and history of the area is given in the following section.

6.1 Stone Age

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools (Coertze & Coertze 1996: 293). 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. The division for the Stone Age according to Korsman & Meyer (1999: 93-94) is as follows:

Early Stone Age (ESA) 2 million – 150 000 years ago

Middle Stone Age (MSA) 150 000 – 30 000 years ago

Late Stone Age (LSA) 40 000 years ago – 1850 - A.D.

No Stone Age sites (Bergh 1999: 4) are known to be located in the direct area of development. There is however a number of Stone Age sites in the larger geographical area, including Pietkloof and Uitkomst Cave, as well as sites in the so-called Magaliesberg Research Area to the north of the development area (Bergh 1999: 4). The sites date from the Early to Later Stone Age and are found mostly in caves/shelters and not in open areas. Included here is a number of rock engraving sites (Bergh 1999: 5).

6.2 Iron Age

The Iron Age is the name given to the period of human history when metal was mainly used to produce artifacts (Coertze & Coertze 1996: 346). In South Africa it can be divided in two separate phases according to Van der Ryst & Meyer (1999: 96-98), namely:

Early Iron Age (EIA) 200 – 1000 A.D.
Late Iron Age (LIA) 1000 – 1850 A.D.

Huffman (2007: xiii) however indicates that a Middle Iron Age should be included. His dates, which now seem to be widely accepted in archaeological circles, are:

Early Iron Age (EIA) 250 – 900 A.D.
Middle Iron Age (MIA) 900 – 1300 A.D.
Late Iron Age (LIA) 1300 – 1840 A.D.

No Iron Age sites, features or artifacts are located in the development area. The closest known Iron Age site (EIA) is situated at Broederstroom to the north of the study area (Bergh 1999: 6). The Broederstroom site belongs to the so-called Mzonjani facies of the Urewe pottery tradition and dates to AD450 – AD750 (Huffman 2007: 127). The closest LIA sites are found at Bruma and Melvillekoppies (Bergh 1999: 7). It's also possible that sites belonging to the Ntsuanatsatsi facies of the Urewe tradition (AD1450-AD1650), the Uitikomst facies of the same tradition (AD1650-AD1820), the Olifantspoort facies of Urewe (AD1500-AD1700) and the Buispoort facies of Urewe (AD1700-1840) could be found in the larger geographical area (Huffman 2007: 167; 171; 191 & 203). During the difagane, Mzilikazi's Ndebele moved through and settled in the area between 1827 & 1832 (Bergh 1999: 11). Sites dating to Olifantspoort are also located at Broederstroom.

6.3 Historical Age

In essence the historical age in South Africa starts when the first people who could read and write moved into the area. The earliest Europeans who moved through the area were the groups of Schoon & McLuckie and those of Archbell & Moffat (the famous missionaries), both during 1829 (Bergh 1999: 12). They were closely followed by others, including the Voortrekkers after 1844 (Bergh 1999: 13-14).

Site 1

This site contains a fairly dense concentration of building rubble (bricks and cement) that could be the remnants of structure (farm labourer house?). Some refuse (household) pits were also located in close proximity. The material here are modern and not of any historical significance. It is also possible that the rubble was dumped here and is not the remains of a structure that was present here in the recent past.

Site Location: **S25.95384 E27.91865**

Significance: **Low. Completely destroyed.**

Impact & Mitigation: **Direct if development footprint located here. No mitigation needed.**

Site 2

Site 2 consists of the cement foundation and floor of a structure of unknown age and function. It is believed that this structure is once again not of any significance and less than 60 years of age.

Site Location: S25.95286 E27.92034

Significance: Low

Impact & Mitigation: Direct if development footprint located here. No mitigation required.



Figure 6: Site 1 remains. This could be part of a structure or just further evidence of informal dumping in the area.



Figure 7: Rubbish pit near Sites 1 and 2.



Figure 8: Site 2 – cement floor and foundation of structure.

Sites 3 & 4

Although recorded separately (via GPS coordinates) these two features most likely form part of one site. Both consist of the remains of stone and clay built structures. The structures consist of at least 2 rooms each and has been fairly well preserved, with the walls being in some parts more than 1m in height. The age of the structures is not known, and no cultural material was located close by to help with dating these. It is however possible that they could be older than 60 years of age and related to earlier farming in the area. The structures are probably the remains of farm labour houses.

Site Locations: S25.95570 E27.91572 & S25.95522 E27.91563

Cultural Significance: Medium

Heritage Significance: Grade III

Field Rating: General Protection IVB. Should be mitigated before destruction

**Impact & Mitigation: If impacted on by development mitigation measures will have to be implemented. Mitigation will include mapping and drawing and detailed recording.
Archival research**

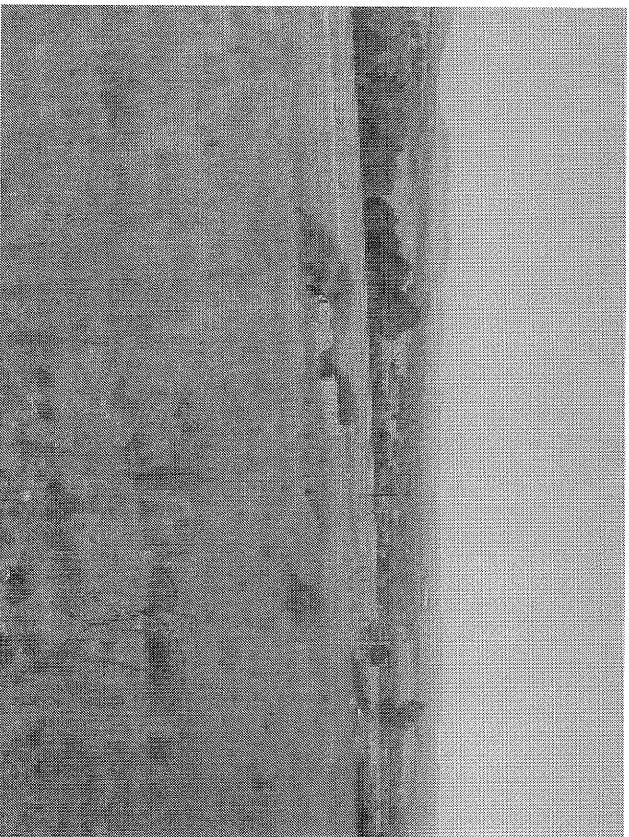


Figure 9: View of Sites 3/4.

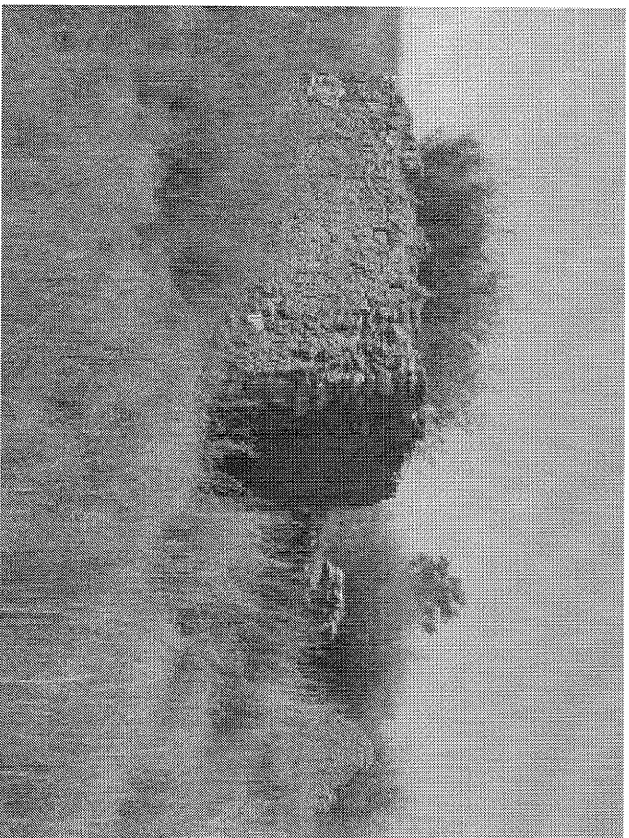


Figure 10: Site 3 structure.

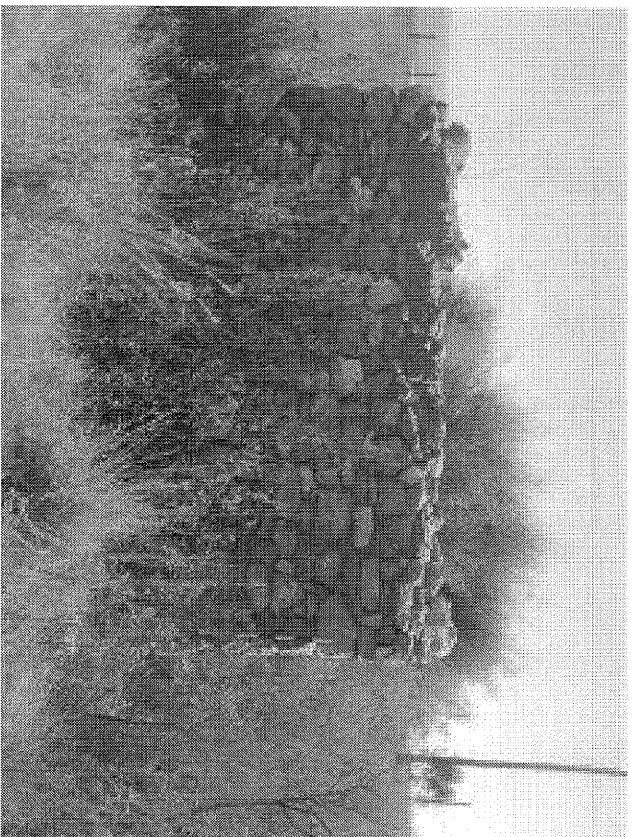


Figure 11: Site 4 structure.

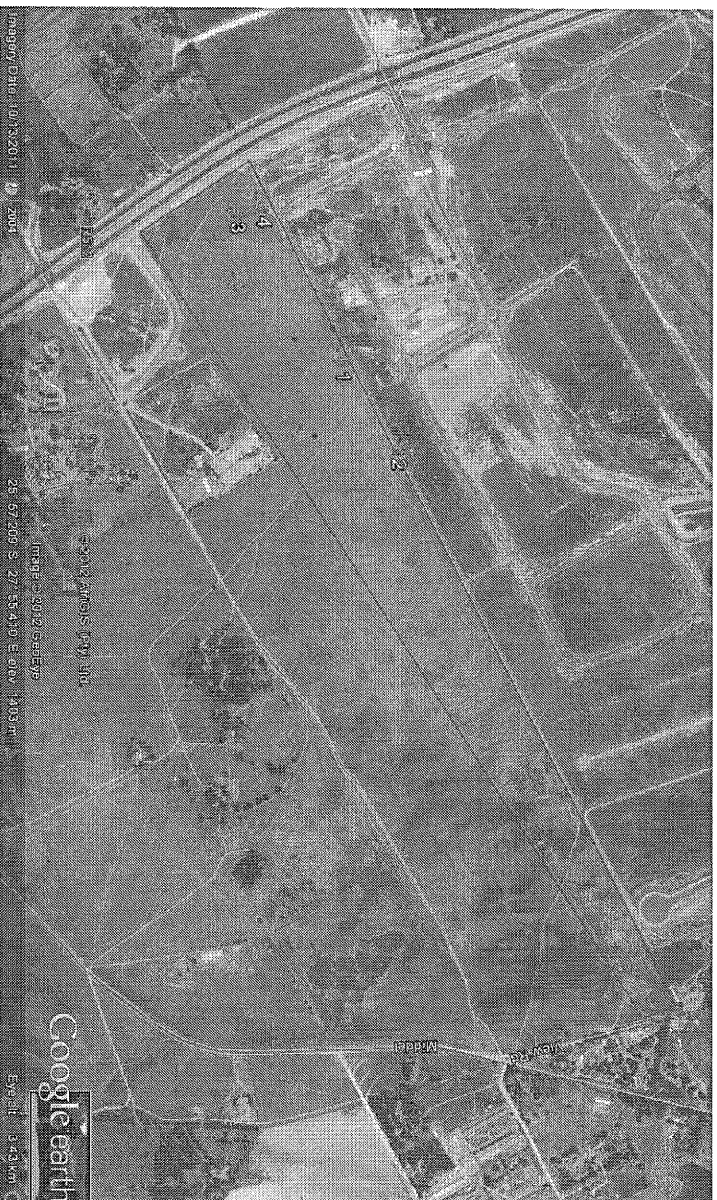


Figure 12: Distribution of sites in development area (Google Earth 2011).



Figure 13: Closer view of Sites 3 & 4. The red circle is around an informal landfill site in the area (Google Earth 2011).

Although no graves or grave sites were recorded in the area during the survey the client did indicate that they saw what might be graves, although they could not substantiate and did not take any GPS coordinates. With homesteads in the area (Sites 3 and 4) there is always the possibility of the presence of graves close-by. Furthermore the database of the Genealogical Society of SA (www.national.archives.gov.za) does indicate that there are graves present on Bultfontein near Lanseria in the Krugersdorp district. It does not however provide information on which portion and the exact location. Previous work by Anton Pelser in the Lanseria area (on bordering farms) did locate a number of grave sites, mainly consisting of low stone packed graves (Pelser 2011). Care should therefore be taken when development work commences that if any possible graves are identified that they be reported to a heritage specialist.

7. CONCLUSIONS AND RECOMMENDATIONS

In conclusion it is possible to say that the assessment of Portion 72 of the farm Bultfontein 533 JQ, for the proposed development of a Storage Facility and Parking Area for heavy machinery near Lanseria in Gauteng was conducted successfully. A 1ha area on the farm will be selected for development purposes. A number of sites of some cultural significance were located and recorded in the area. Should the development impact on these sites (Sites 3 and 4) mitigation measures will have to be implemented.

The following is recommended:

1. that the structures on these sites be mapped and recorded in detail. As part of the recording detailed archival research on the history of the sites will have to be undertaken.

2. should there be no direct impact as a result of the development activities these sites must be left in tact and a Heritage Management Plan be drafted in implemented. This management plan will also look at measures to be implemented should any further sites, features (such as previously unknown graves or grave sites) and cultural material of significance be uncovered during development activities.

Finally, it should be noted that the subterranean presence of archaeological and/or historical sites, features or artifacts are always a distinct possibility. Care should therefore be taken during any development activities that if any of these are accidentally discovered, a qualified archaeologist be called in to investigate. This would include the discovery of previously unknown graves.

8. REFERENCES

- Locality map provided by JW Environmental Solutions (Pty)Ltd
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www.national.archives.gov.za

APPENDIX A

DEFINITIONS:

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

Feature: Means a coincidental find of movable cultural objects.

Object: Means an Artifact (cultural object).

(Also see Knudson 1978: 20).

APPENDIX B

DEFINITIONS/STATEMENTS 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:

1. 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.

2. 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.

3. Field ratings:

- National Grade I significance: Should be managed as part of the national estate.
- Provincial Grade II significance: Should be managed as part of the provincial estate.
- Local Grade IIIA: Should be included in the heritage register and not be mitigated (high significance).
- Local Grade IIIB: Should be included in the heritage register and may be mitigated (high/ medium significance).
- General protection A (IV A): Site should be mitigated before destruction (high/ medium significance).
- General protection B (IV B): Site should be recorded before destruction (medium significance).
- General protection C (IV C): Phase 1 is seen as a sufficient recording of the existing structure and it may therefore be demolished of (low significance).

APPENDIX D

PROTECTION OF HERITAGE RESOURCES:

1. Formal protection:

Formal protection is applicable to the following:

- National heritage sites and Provincial heritage sites – grades I and II
- Protected areas – which is described as an area surrounding a heritage site
- Provisional protection – described as protection for a maximum period of two years
- Heritage registers – listings of grades II and III
- Heritage areas – areas which include more than one heritage site
- Heritage objects – heritage objects include inter alia archaeological, paleontological, meteorites, geological specimens, visual art, military, numismatic and books.

2. General protection:

General protection is applicable to:

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

APPENDIX E

HERITAGE IMPACT ASSESSMENT PHASES

- Phase 1: Pre-assessment or scoping phase – the establishment of the scope of the project and the terms of reference.
- Phase 2: Baseline assessment – the establishment of a broad framework of the potential heritage of an area.
- Phase 3: Assessment of potential impacts – the identification of sites, assessment of their significance, commenting on the potential impact of the proposed development and recommending mitigation measures or the conservation thereof.
- Phase 4: Letter of recommendation for exemption –submitted in the event that no likelihood exists that any sites will be impacted upon.
- Phase 5: Mitigation or rescue – planning the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
- Phase 6: Compilation of and implementation of a management plan – in rare cases where sites are regarded as of high importance such that development cannot be permitted unconditionally.

