ARCHAEOLOGICAL IMPACT ASSESSMENT REPORT

FOR THE

PROPOSED PROSPECTING FOR AGGREGATE AND SAND

FOR

CAROCODE (PTY) LTD

ON PORTION 1, 17, 117, 119 AND 120 OF THE FARM DOORNRANDJE 386 JR

IN THE VICINITY OF

District Municipality: Greater Tshwane Municipality
Gauteng Province

SOUTH AFRICA

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Date:	2012/06/11	2012/06/14	2012/XX/XX

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1 Executive Summary

Environmental Assurance (Pty) Ltd was appointed by PS Invest to undertake an Archaeological Impact Assessment (AIA) that forms part of an Environmental Impact Assessment (EIA) for the proposed prospecting of aggregate and sand on portions 1, 17, 117, 119 and 120 of the farm Doornrandje 386 JR, Gauteng (Map reference 1: 50 000 - 2527DD, S 25º 55' 21.21" E 27º 59' 45.52").

The survey revealed the fragmented foundation of a concrete enclosure and grave on the eastern boundary of portion 1, close to where portion 119 joins. The age of the structure is not known and no associated material remains were discovered. As a result of poor visibility (vegetation) and lack of access to certain portions other material remains of cultural importance may be found elsewhere in the demarcated area. The visible features may therefore not entirely be representative of the cultural landscape. One important point that needs mentioning and which influences the larger historical and prehistorically landscape is the proximity of the Cradle of Humankind, a UNESCO world heritage site, which is located about 8Km to the west of the proposed development.

Although the farm Doornrandje falls well outside the boundary of the Cradle of Humankind protection area, the larger landscape still forms an integral part of the world heritage site. It is therefore strongly recommended that a Paleontological Impact Assessment be conducted on the farm Doornrandje 386 JR, portions 1, 17, 117, 119 and 120, in order to avoid destruction of sensitive fossil remains. It is further recommended that a standard 100m conservation buffer be placed around the grave which would then automatically situate the concrete enclosure within the buffered area. Because archaeological artefacts generally occur below surface, the possibility exists that other culturally significant material and skeletal remains may be exposed during development and construction phases, in which case all activities must be suspended pending further archaeological investigations by a qualified archaeologist (See National Heritage and Resources Act, 25 of 1999 section 36 (6)). Should these recommendations be adhered to, development may proceed from a heritage point of view.

2 Project Background

2.1 Introduction

Environmental Assurance (Pty) Ltd was appointed by PS Invest to undertake an Archaeological Impact Assessment (AIA) that forms part of an Environmental Impact Assessment (EIA) for the proposed prospecting of aggregate and limestone on portions 1, 17, 117 and 119 of the farm Doornrandje 386 JR, Gauteng (Map reference 1: 50 000 - 2527DD, S 25º 55' 21.21" E 27º 59' 45.52"). The purpose of this study was to examine the demarcated area via a pedestrian survey to determine whether archaeological remains of heritage value exist. The aim of this report is to provide the developer with information regarding the location of heritage resources that will aid decision making in terms of selecting areas to be developed.

During the survey sites of heritage importance were located and recorded via GPS location and photographic record. In the following report the significance and importance as well as legislative requirements regarding heritage resources found in the demarcated area are discussed.

2.2 Legislation

The South African Heritage Resources Agency (SAHRA) aims to conserve and control the management, research, alteration and destruction of cultural resources of South Africa and to prosecute if necessary. It is therefore crucially important to adhere to heritage resource legislation contained in the Government Gazette of the Republic of South Africa (Act No.25 of 1999) as many heritage sites are threatened daily by development. Conservation legislation requires impact assessment reports that, in all cases must include EIA's and HIA's.

HIA's should be done by qualified professionals with adequate knowledge to (a) identify all heritage resources including archaeological and palaeontological sites that might occur in areas of developed and (b) make recommendations for protection or mitigation of the impact of the sites.

2.2.1 The EIA and HIA processes

Phase 1 Archaeological Assessments generally involve the identification of sites during a field survey with assessment of their significance, the possible impact development might have and relevant recommendations.

All Heritage Impact Assessment reports should include:

a. Location of the sites that are found

b. Short description of the characteristics of each site

c. Short assessment of how important each site is, indicating which should be conserved and which mitigated

d. Assessment of the potential impact of the development on the site/s

e. In some cases, a shovel test, to establish the extent of a site, or collection of material might be required to identify the associations of the site. (A pre-arranged SAHRA permit is required) and

f. Recommendations for conservation or mitigation

This HIA report is intended to inform the client about the legislative protection of heritage resources and their significance and make appropriate recommendations. It is essential that it also provides the heritage authority with sufficient information about the sites to enable it to assess with confidence:

a. Whether or not it has objections to a development

b. What the conditions are upon which such development might proceed

c. Which sites require permits for mitigation or destruction

d. Which sites require mitigation and what this should comprise

e. Whether sites must be conserved and what alternatives can be proposed that may re-locate the development in such a way as to conserve other sites and

f. What measures should/can be put in place to protect the sites that should be conserved

When a Phase 1 HIA is part of an EIA, wider issues such as public consultation and assessment of the spatial and visual impacts of the development may be undertaken as part of the general study and may not be required from the archaeologist. If, however, the Phase 1 project forms a major component of an HIA it will be necessary to ensure that the study addresses such issues and complies with section 38 of the National Heritage Resources Act.

2.2.2 Legislation regarding archaeology and heritage sites

National Resource Act of April 1999

According to Act No.25 of 1999 a historical site is "any identifiable building or part thereof, marker, milestone, gravestone, landmark or tell older than 60 years." This clause is commonly known as the "60-years clause". Buildings are amongst the most enduring features of human occupation, and this definition therefore includes all buildings older than 60 years, modern architecture as well as ruins, fortifications and Farming Community settlements. "Tell" refers to the evidence of human existence which is no longer above ground level, such as building foundations and buried remains of settlements (including artefacts). The Act identifies heritage objects as:

- objects recovered from the soil or waters of South Africa including archaeological and palaeontological objects, meteorites and rare geological specimens.
- visual art objects
- military objects
- numismatic objects
- objects of cultural and historical significance
- objects to which oral traditions are attached and which are associated with living heritage.
- objects of scientific or technological interest.
- any other prescribed category.

With regards to activities and work on archaeological and heritage sites this Act states that:

"No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit by the relevant provincial heritage resources authority." (34. [1] 1999:58)

and

"No person may, without a permit issued by the responsible heritage resources authority-

(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 which assist in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites. (35. [4] 1999:58)."

and

"No person may, without a permit issued by SAHRA or a provincial heritage resources agency-

(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, remove from its original position or otherwise disturb any grave or burial ground older than 60 tears which is situated outside a formal cemetery administered by a local authority;

(c) bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) and excavation equipment, or any equipment which assists in the detection or recovery of metals (36. [3] 1999:60)."

On the development of any area the gazette states that:

"…any person who intends to undertake a development categorised as-

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

(b) the construction of a bridge or similar structure exceeding 50m in length;

(c) any development or other activity which will change the character of a site-

(d) exceeding 5000m² in extent; or

(e) involving three or more existing erven or subdivisions thereof; or

(f) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(g) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;

(h) the re-zoning of a site exceeding 10000m² in extent; or

(i) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development (38. [1] 1999:62-64)."

and

"The responsible heritage resources authority must specify the information to be provided in a report required in terms of subsection (2)(a): Provided that the following must be included:

(a) The identification and mapping of all heritage resources in the area affected;

(b) an assessment of the significance of such resources in terms of the heritage assessment criteria set out in section 6(2) or prescribed under section 7;

(c) an assessment of the impact of the development on such heritage resources;

(d) an evaluation of the impact of the development on heritage resources relative to the sustainable social and economic benefits to be derived from the development;

(e) the results of consultation with communities affected by the proposed development and other interested parties regarding the impact of the development on heritage resources;

(f) if heritage resources will be adversely affected by the proposed development, the consideration of alternatives; and

(g) plans for mitigation of any adverse effects during and after the completion of the proposed development (38. [3] 1999:64)."

Human Tissue Act and Ordinance 7 of 1925

The Human Tissues Act (65 of 1983) and Ordinance on the Removal of Graves and Dead Bodies (Ordinance 7 of 1925) protects graves younger than 60 years. These fall under the jurisdiction of the National Department of Health and the Provincial Health Departments. Approval for the exhumation and re-burial must be obtained from the relevant Provincial MEC as well as the relevant Local Authorities. Graves 60 years or older fall under the jurisdiction of the National Heritage Resources Act as well as the Human Tissues Act, 1983.

3 Study Area and Background

Doornrandje 386 JR is located about 20 kilometers north of the edge Johannesburg, 30 kilometers southwest of the Pretoria CBD and 10 kilometers east of the Cradle of Humankind protected area. The closest perennial river to the area demarcated for development is the Jukskei River, which is located about five kilometers to the west. (See Figure 1 & 2 for general area).

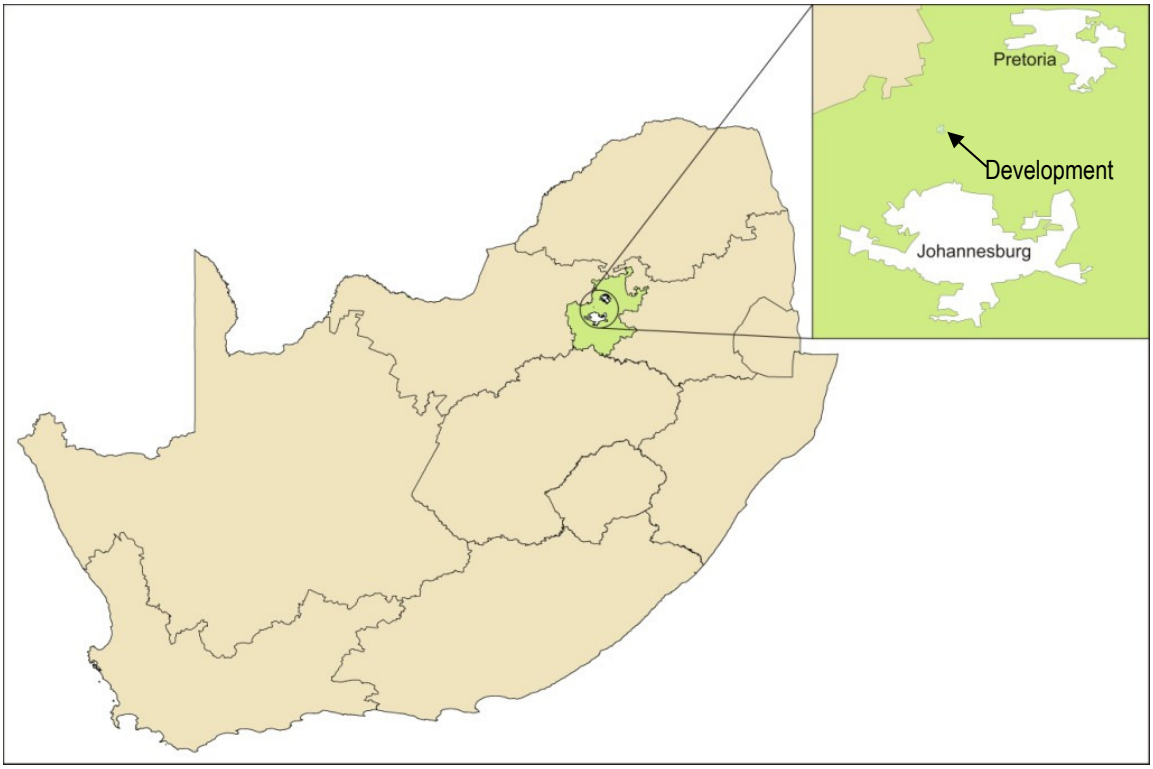

Figure 1: Provincial location of area marked for development

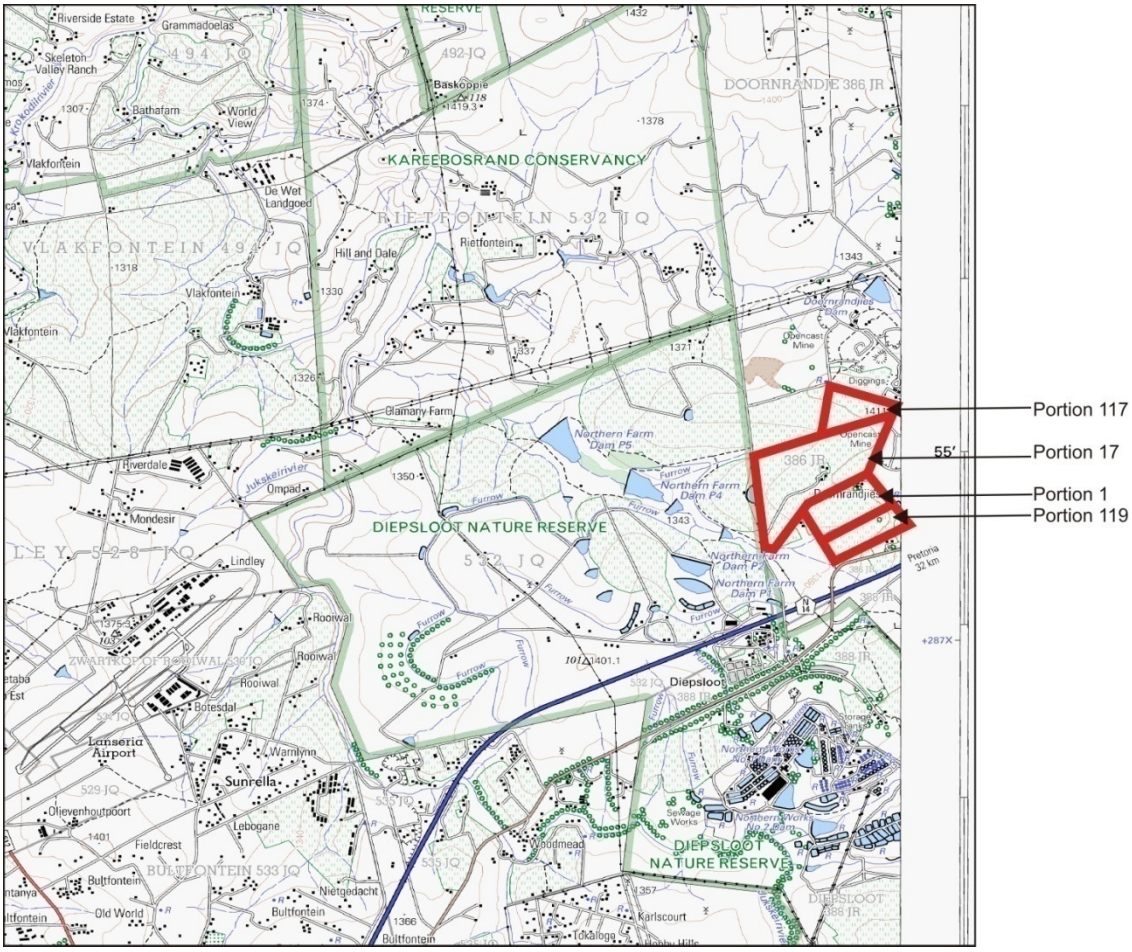

Figure 2: Segment of SA 1: 50 000, 2527DD indicating the area marked for development.

3.1 Archaeological Background

The southern African archaeology is broadly divided into the Earlier, Middle and Later Stone Age, Early and Later Iron Age, and Historical / Colonial Periods.

3.1.1 The Cradle of Humankind

The Cradle of Humankind consist of the Fossil Hominid Sites of Sterkfontein, Swartkrans, Kromdraai and Environs, an area spanning 47 000 hectare. The site was classified as a UNESCO (United Nations Educational Scientific and Cultural Organization) World Heritage Site in 1999 and in 2005 the Makapan Valley in the Limpopo Province and the Taung Skull Site in the Northwest Province were added as an extension to the Cradle of Humankind World Heritage Site (UNESCO 2012).

The favourable conditions for the formation of the Sterkfontein Caves date back to about 2.5 billion years ago during which the interior of South Africa was submerged under the sea. Between 20 and 30 million years ago the first caverns started to form while the sea had already retreaded by that time (Clarke & Kathleen 2000: 3).

The remains found at Sterkfontein, however, range in age from 3.5 to 1.5 million years ago. These remains include about 500 skeletal, skull, jaw and teeth fossils, thousands of animal fossils, 300 pieces of fossilized wood, and more than 9000 stone tools. The site is also important in terms of modern humans as some fossils close to their emergence (250 000 to 1000 thousand years ago) were discovered. Some of the earliest hominid fossils were identified from boxes of animal bones by Clarke in 1994 and subsequent discoveries revealed a complete skull. Palaeomagnetic dating of layers above and below the hominid remains suggests a date of 3.3 million years ago, making this the oldest complete skeleton in South Africa. The *Australopithecus afarensis* footprints at Laetoli in Tanzania date to 3.6 million years ago and bares similarities to remains found at Sterkfontein. Foot bones suggest that upright walking was possible but also that adaptation for tree climbing existed (Clarke & Kathleen 2000: 6-7). Because hominids developed bipedal movement, they had access to a variety of habitats and environments, allowing them to secure food from a greater variety of sources. Preserving the ability to climb trees, however, provided hominids with safety from carnivores (Clarke & Kathleen 2000: 6-8). Later discoveries at Sterkfontein include a hominid cranium that could possibly be classified as *Australopithecus* with a date of between 2.6 and 2 million years ago (Clarke & Kathleen 2000: 9).

3.1.2 The Earlier Stone Age

The earliest stone tool industry, the Oldowan, was developed by the earliest members of the genus *Homo* such as *Homo habilis*, around 2.6 million years ago. It contained tools such as cobble cores and pebble choppers (Toth & Schick 2007). The oldest stone tools from the Sterkfontein cave are found in the Oldowan Infill and date to between 2 and 1.7 million years ago. As the name suggests these tools are similar to those found at Olduvai Gorge in Tanzania. These stone tools therefore suggest the earliest direct evidence for culture in southern Africa (Clarke & Kathleen 2000). It was completely replaced by the Acheulean industry, which was first conceived by *Homo ergaster* around 1.8 or 1.65 million years ago, which lasted until around 300 000 Kya. Evidence from this period is also found at Swartkrans, Kromdraai and Sterkfontein. At about 1.5 million years ago the western side of the cave probably enlarged, since artefact-bearing breccias are more widely distributed. The most typical tools of the ESA are handaxes, cleavers, choppers and spheroids. Although they appear to have used handaxes often, there is

disagreement about their use. There are no indications of hafting, and some artefacts are far too large for that. Choppers and scrapers were likely used for skinning and butchering scavenged animals and sharp ended sticks were often obtained for digging up edible roots. Presumably, early humans used wooden spears as early as 5 million years ago to hunt small animals. Fire was used by the hominin *Homo erectus* and *Homo ergaster* as early as 300,000 or 1.5 million years ago and possibly even earlier. The invention of fire reduced mortality rates and provided protection against predators. Examples of sites from this time period include Kromdraai, Makapansgat and Sterkfontein and Swartkrans (Toth & Schick 2007).

3.1.3 The Middle Stone Age

Middle Stone Age artefacts started appearing about 250 000 years ago and replaced the larger Earlier Stone Age bifaces, handaxes and cleavers with smaller flake industries consisting of scrapers, points and blades. These artefacts roughly fall in the 40-100 mm size range and were in some cases attached to handles, indicating a significant technical advance. Few other artefacts remain from this period. In some cases circular hearths were found which indicate the ability to make fire while animal and plant remains refer to a hunting and gathering lifestyle. It is also during this period the first *Homo sapiens* species emerged. Associated sites are Klasies River Mouth, Blombos Cave and Border Cave (Deacon & Deacon 1999). The most recent deposit in the Sterkfontein cave dates to between 115 000 and 253 000 years ago and includes a few hominid fragments, fauna and Middle Stone Age artefacts (Clarke & Kathleen 2000:10-13).

3.1.4 The Later Stone Age

This time period ranges from about 20 000 years ago to the present and saw the emergence of *Homo sapiens sapiens*. Stone tools from this period are generally smaller but were used to do the same job as those from previous periods, but in a different way. At the time of European contact in South Africa some, such as the Khoisan people, were still making these tools. This greatly helped in understanding what these tools were used for. Some Later Stone Age associations are: rock art, smaller stone tools (microliths), bows and arrows, bored stones, grooved stones, polished bone tools, earthenware pottery and beads. Some Later Stone Age sites include Nelson Bay Cave, Rose Cottage Cave and Boomplaas Cave (Deacon & Deacon 1999).

3.1.5 Early Iron Age

The Early Iron Age marks the movement of farming communities into South Africa at around 200 A.D. These groups were agro-pastoralist communities that settled in the vicinity of water in order to provide subsistence for their cattle and crops. Artefact evidence from Early Iron Age sites is mostly found in the form of ceramic assemblages. The origins and archaeological identities of this period are largely based upon ceramic typologies. Early Iron Age ceramic traditions are classified by some scholars into different "streams" or trends in pot types and decoration that, over time emerged in southern Africa. These "streams" are identified as the Kwale Branch (east), the Nkope Branch (central) and the Kalundu Branch (west). Early Iron Age ceramics typically display features such as large and prominent inverted rims, large neck areas and fine elaborate decorations. This period continued up to the end of the first millennium AD (Huffman 2007).

A relevant Early Farming Community site in the vicinity of the area of proposed development is Broederstroom, which is a 12 hectare site located in the Brits district close to Hartbeespoort Dam. Excavations at Broederstroom were started by Revil Mason in 1973 and continued by Tom Huffman. Radiocarbon dating dates the site to between AD 550 and AD 650 with remains including iron slag with furnaces and tools, copper beads, marine shells (suggesting contact with the east coast), potsherds and 49 huts. Remains also suggest that cattle and sheep or goats were kept while grinding stones points to the cultivation of grain. The decorated pottery found at Broederstroom differs from Early Farming Communities pottery in Zimbabwe in the sense that the latter displays stamped decorations opposed to incisions characterising the former. Mason suggested that the Broederstroom pottery has similar aspects to pottery found in Malawi, although some elements of pottery found in Kenya and the KwaZulu –Natal coast are evident. Broederstroom was also initially assigned to the western stream of the Early Iron Age Complex, but after Huffman re-analyzed the pottery it was reassigned to the eastern stream. Huts at the settlement are organized in a circular formation around cattle enclosures, indicating the use of the 'central cattle pattern'. It is estimated that Broederstroom had a population of between 200 and 300. Other well-known Early Farming Community sites include the Lydenburg Heads in Mpumalanga, Happy Rest in the Limpopo Province and Mzonjani in Kwa-Zulu Natal.

3.1.6 Later Iron Age and Historical Periods

Later Iron Age sites in the area are generally located towards the Magaliesberg, which is to the north of the area marked for development. With the onset of the 'Difaqane' around the beginning of the 19th century the Transvaal Ndebele were already settling areas north of the Vaal River. According to oral traditions they have been settling this area for more than 100 years. The Transvaal Ndebele can be sub-divided into the Northern and Southern Ndebele and should not be confused with Mzilikazi's Ndebele (Bergh 1999: 108). Oral histories suggest that the Southern Ndebele, identified by Manala/Ndzundza and Po/Tlhako groups and Mabhogo's (Mapoch's) Ndebele, moved from the Witwatersrand higveld to the Pretoria general area. Accordingly they trace their origin to a certain 'Musi' between 1630 and 1670 and it is his son, Tshwane, whose name is connected to the greater Tshwane municipality today. Another connection between the Ndebele and Pretoria exists. Some of the Ndebele groups were at some stage incorporated into Sotho/Tswana/Pedi-speaking groups. One of these groups, the Po/Tlhako's chief was Mogale, which refers to Magaliesberg (Parsons 1995: 331-333).

Among the Southern Ndebele several distinctions can be made, especially in the period prior to the 'difaqane'. These include the Hwaduba, who settled in the vicinity of the Piernaars and Apies Rivers who during later times adopted Kgatla language and culture, the Manala to the north of Pretoria, and Ndzundza, who during earlier times moved from the Pretoria area to KwaMaza in the vicinity of Stoffberg in present day Mpumalanga. The Northern Ndebele occupied the general area Mokopane and are therefore further removed from the general study area. It should also be noted that at an earlier stage some Ndebele broke away from the Pretoria area to settle further to the west and was allegedly referred to as Tswana (Bergh 1999: 108).

Several clashes between the Voortrekkers A.H Potgieter, G. Maritz and P. Uys and Mzilikazi's Ndebele in the 1830's led to Mzilikazi permanently moving from the area in a northern direction. Towards the end of 1838 Potgieter sent a scouting patrol to the north of the Vaal River to determine Mzilikazi's whereabouts. After leaving their wagons at Wonderfontein, which is probably a farm just north of the town of Carletonville, they continued further on horseback to the Magaliesberg where they were informed that Mzilikazi had indeed permanently moved to the region north of modern day Rustenburg. One group of Mzilikazi's Ndebele, however, remained behind in the region between Pretoria and Brits, but were attacked and defeated by a commando sent by Potgieter in 1840 (Bergh 1999: 126-127).

4 Methodology

Archaeological reconnaissance is the systematic identification of archaeological sites by means of surveys. Reconnaissance of the area under question was done through an unsystematic pedestrian survey in those portions that were accessible. Due to some limitations systematic surveying was not possible (see **4.2**). The reconnaissance of the area under question served a twofold purpose:

- The identification/location of archaeological and historical sites.
  This was done in order to establish whether any archaeological or historical areas of interest exist within the areas marked for development, and attempt to determine the extent of such occurrences in the area under question.

- The spatial recording of archaeological sites.
  All archaeological and historical events have spatial definitions in addition to their cultural and chronological context. Where applicable, spatial recording of these definitions were done by means of a handheld GPS (Global Positioning System).

4.1 Sources of information

Standard archaeological procedures for the observation of heritage resources were followed at all times during the survey. As most archaeological material occur in single or multiple stratified layers beneath the soil surface, special attention was given to disturbances, both man-made such as roads and clearings, as well as those made by natural agents such as burrowing animals and erosion. Locations of archaeological material remains were recorded by means of a Garmin Oregon 550 GPS and archaeological features and general conditions on the terrain were photographed with a Sony Cyber-shot digital camera.

A literature study, which included previous work done in the region, was conducted in order to place the area under question into context from a heritage perspective. Special attention was paid to the Cradle of Humankind world heritage site and its associated fossils, as well as Iron Age activities.

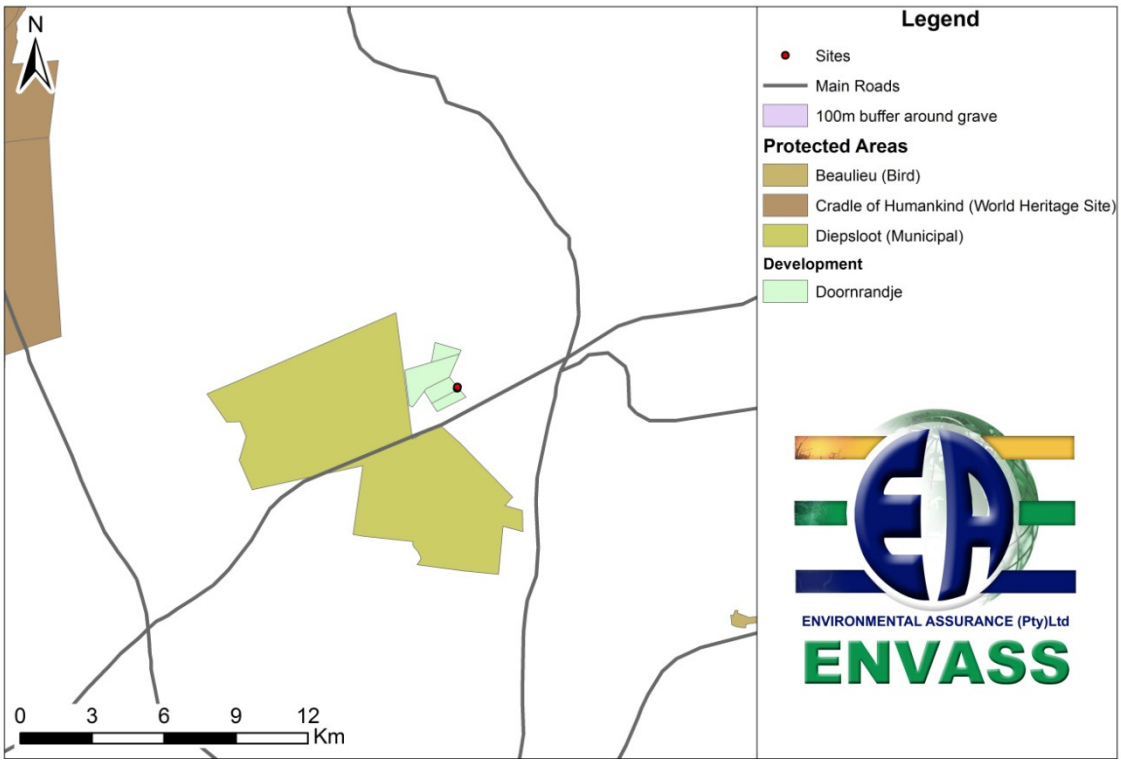

Figure 3: Map of area marked for development indicating archaeological/historical sites as well as protected areas.

4.2 Limitations

The surrounding vegetation in the area under question mostly consisted of Egoli Open Grassland. The general visibility of the investigated areas favoured the discovery of structures, but fragmented features and artefacts were difficult to locate at the time of the survey (June 2012) due to thick grass cover. Other limitations include lack of access to certain portions of the terrain (portions 17 and 117), a relatively wet area which could be wetland, and the general size of the area of which prospecting rights were applied for. Areas selected for surveying were therefore based on general accessibility. It should be noted that undetected heritage remains may be present in sub-surface deposits, in which case all activities must be suspended pending further archaeological investigations by a qualified archaeologist (See National Heritage and Resources Act, 25 of 1999 section 36 (6)).

5 Archaeological and Historical Remains

5.1 Stone Age Remains

No Stone Age archaeological remains were identified in the area demarcated for development.

5.2 Iron Age Farmer Remains

No Iron Age archaeological remains were identified in the demarcated area.

5.3 Historical / Colonial Remains

No clear evidence for Historical / Colonial Period remains were observed during the survey. The only evidence discovered was the fragmented foundations of a concrete structure, which probably dates to more recent times **(Figure 4 & 5)**. This structure is located about 30 meters from the eastern side of portion 1 and about 35 meters from portion 119's northern boundary. Although no material remains were observed that could be associated with the structure, the possibility exists that material may be located below surface.

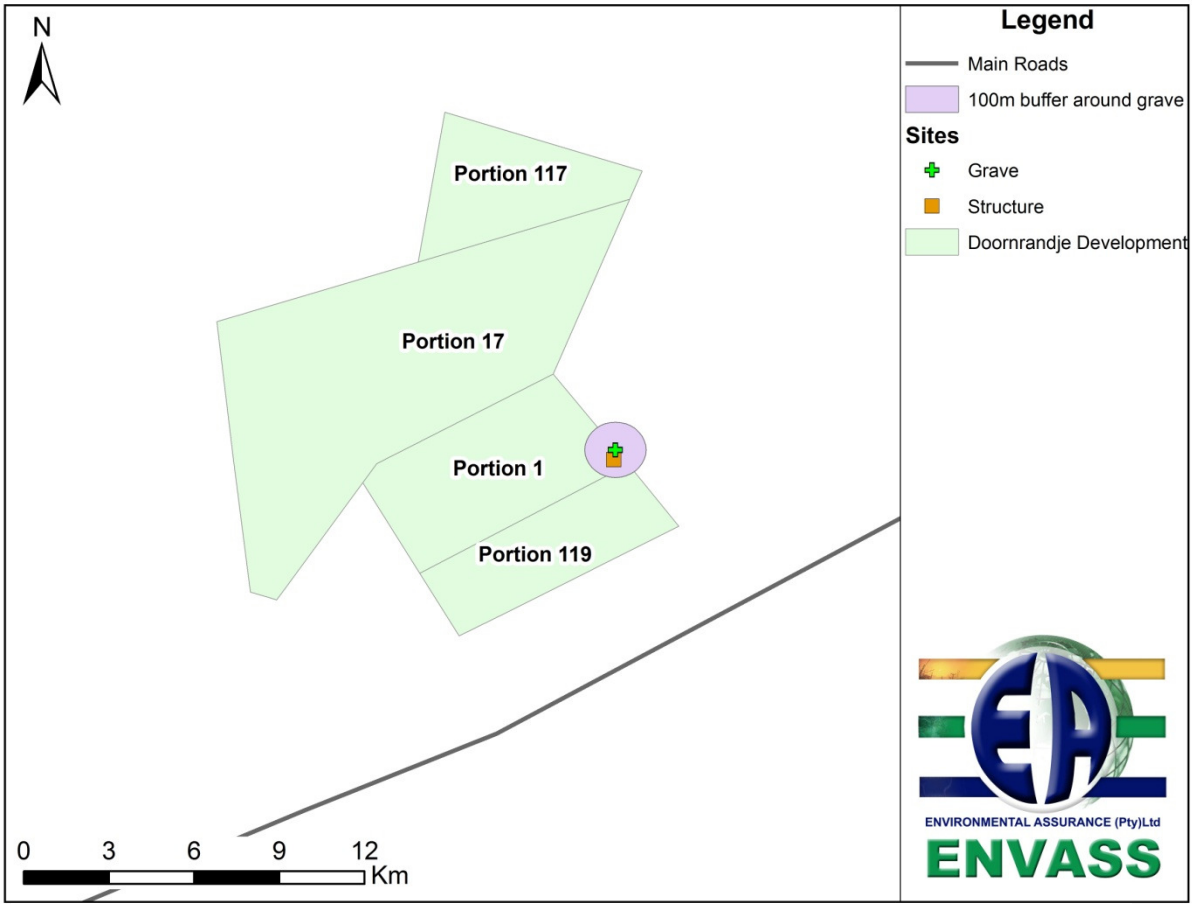

Figure 4: Distribution of mapped survey points on the farm Doornrandje 386 JR.

Site	Coordinates
Structure	25°55'17.49"S 27°59'55.24"E

Table 1: Mapped survey points and their coordinates on the farm Doornrandje 386 JR.

Figure 5: Possible Historical Period house on the farm Doornrandje 386 JR.

5.4 Graves

One grave was observed on portion 1 of Doornrandje 386 JR. The grave is located on the boundary of portion1 and about 35 meters from the concrete foundations in a northern direction. The inscription on the headstone indicates that the grave dates to 1980 **(Figure 6 & 7)**.

Site	Coordinates
Grave	25°55'16.33"S 27°59'55.43"E

Table 2: The grave and its coordinates on the farm Doornrandje 386 JR.

Figure 6: The grave on portion 1 on the farm Doornrandje 386 JR.

Figure 7: Close-up of the grave on portion 1 on the farm Doornrandje 386 JR.

6 Evaluation & Recommendations

The significance of an archaeological site is based on the amount of deposit, the integrity of the context, the kind of deposit and the potential to help answer present research questions. Historical structures are defined by Section 34 of the National Heritage Resources Act, 1999, while other historical and cultural significant sites, places and features, are generally determined by community preferences.

A fundamental aspect in the conservation of a heritage resource relates to whether the sustainable social and economic benefits of a proposed development outweigh the conservation issues at stake. There are many aspects that must be taken into consideration when determining significance, such as rarity, national significance, scientific importance, cultural and religious significance, and not least, community preferences. When, for whatever reason the protection of a heritage site is not deemed necessary or practical, its research potential must be assessed and if appropriate mitigated in order to gain data / information which would otherwise be lost. Such sites must be adequately recorded and sampled before being destroyed.

6.1 Evaluation

All sites should include a field rating in order to comply with section 38 of the national legislation. The field rating and classification in this report is prescribed by SAHRA.

6.1.1 Field Rating

Rating	Field Rating/Grade	Significance	Recommendation
National	Grade 1		National site
Provincial	Grade 2		Provincial site
Local	Grade 3 A	High	Mitigation not advised
Local	Grade 3 B	High	Part of site should be retained
General protection A	4 A	High/Medium	Mitigate site
General Protection B	4 B	Medium	Record site
General Protection C	4 C	Low	No recording necessary

Site: Structure

Rating	Field Rating/Grade	Significance	Recommendation
General Protection C	4 C	Low	No recording necessary

Site: Grave

Rating	Field Rating/Grade	Significance	Recommendation
Local	Grade 3 A	High	Mitigation not advised

6.1.2 Statement of significance

Site: Structure

Although a definite date could not be obtained, there is a possibility that the fragmented concrete structure could date to the Historical / Colonial Period. If the structure is older than 60 years it is protected under the National Heritage and Resources Act (25 0f 1999), which means that it needs to be properly recorded by a qualified archaeologist and a destruction permit obtained should the need exist to demolish the structure.

Site: Grave

The National Heritage Resources Act (25 of 1999) and the Human Tissues Act (65 of 1983) protect graves older than 60 years but younger than 100 years. Graves younger than 60 years, however, are protected by the Human Tissue Act (65 of 1983) and falls under Section 2 (1) of the Removal of Graves and Dead Bodies Ordinance (Ordinance no. 7 of 1925). The exhumation of graves falls under the jurisdiction of the National Department of Health as well as the relevant Provincial Department of Health. Exhumation permission must also be obtained from the relevant local or regional council where the grave is located, as well as from the relevant regional and local council to where the grave will be relocated to. The grave on portion 1 of Doornrandje 386 JR is 32 years old and therefore protected under the Human Tissue Act (65 of 1983).

6.2 Recommendations

The survey on the farm Doornrandje 386 JR (portions 1, 17, 117, 119, 120) revealed the fragmented foundation of a concrete enclosure and grave on the eastern boundary of portion 1, close to where portion 119 joins. The age of the structure is not known and no associated material remains were discovered. As a result of poor visibility (vegetation) and lack of access to certain portions other material remains of cultural importance may be found elsewhere in the demarcated area. The visible features may therefore not entirely be representative of the cultural landscape. One important point that needs mentioning and which influences the larger historical and prehistorically landscape is the proximity of the Cradle of Humankind, a UNESCO world heritage site, which is located about 8Km to the west of the proposed development.

Although the farm Doornrandje falls well outside the boundary of the Cradle of Humankind protection area, the larger landscape still forms an integral part of the world heritage site. It is therefore strongly recommended that a Paleontological Impact Assessment be conducted on the farm Doornrandje 386 JR, portions 1, 17, 117, 119 and 120, in order to avoid destruction of sensitive fossil remains. It is further recommended that a standard 100m conservation buffer be placed around the grave which would then automatically situate the concrete enclosure within the buffered area. Because archaeological artefacts generally occur below surface, the possibility exists that other culturally significant material and skeletal remains may be exposed during development and construction phases, in which case all activities must be suspended pending further archaeological investigations by a qualified archaeologist (See National Heritage and Resources Act, 25 of 1999 section 36 (6)). Should these recommendations be adhered to, development may proceed from a heritage point of view.

7 Addendum: Terminology

Archaeology:

The study of the human past through its material remains.

Artifact:

Any portable object used, modified, or made by humans; e.g. pottery and metal objects.

Assemblage:

A group of artifacts recurring together at a particular time and place, and representing the sum of human activities.

Context:

An artifact's context usually consist of its immediate *matrix* (the material surrounding it e.g. gravel, clay or sand), its *provenience* (horizontal and vertical position within the matrix), and its *association* with other artifacts (occurrence together with other archaeological remains, usually in the same matrix).

Cultural Resource Management (CRM):

The safeguarding of the archaeological heritage through the protection of sites and through selvage archaeology (rescue archaeology), generally within the framework of legislation designed to safeguard the past.

Excavation:

The principal method of data acquisition in archaeology, involving the systematic uncovering of archaeological remains through the removal of the deposits of soil and the other material covering and accompanying it.

Feature:

An irremovable artifact; e.g. hearths, architectural elements, or soil stains.

Ground Reconnaissance:

A collective name for a wide variety of methods for identifying individual archaeological sites, including consultation of documentary sources, place-name evidence, local folklore, and legend, but primarily actual fieldwork.

Matrix:

The physical material within which artifacts is embedded or supported, i.e. the material surrounding it e.g. gravel, clay or sand.

Phase 1 Assessments:

Scoping surveys to establish the presence of and to evaluate heritage resources in a given area.

Phase 2 Assessments:

In-depth culture resources management studies which could include major archaeological excavations, detailed site surveys and mapping / plans of sites, including historical / architectural structures and features.
Alternatively, the sampling of sites by collecting material, small test pit excavations or auger sampling is required.

Sensitive:

Often refers to graves and burial sites although not necessarily a heritage place, as well as ideologically significant sites such as ritual / religious places. *Sensitive* may also refer to an entire landscape / area known for its significant heritage remains.

Site:

A distinct spatial clustering of artifacts, features, structures, and organic and environmental remains, as the residue of human activity.

Surface survey:

Two basic kinds can be identified: (1) unsystematic and (2) systematic. The former involves field walking, i.e. scanning the ground along one's path and recording the location of artifacts and surface features. Systematic survey by comparison is less subjective and involves a grid system, such that the survey area is divided into sectors and these are walked systematically, thus making the recording of finds more accurate.

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