

# **PHASE 1 ARCHAEOLOGICAL IMPACT ASSESSMENT**

**for**

**Environmental Assurance  
(Pty) Ltd**

**on**

**the area demarcated for the development  
of Argent Siding near Delmas,  
Mpumalanga**

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## Executive Summary

The author was appointed by Environmental Assurance (Pty) Ltd to undertake a Phase 1 Archaeological study for Canyon Resources (Pty) Ltd on the premises of Argent Station near Delmas, Mpumalanga. The study area is located about 17 km northeast of Delmas and 48 km southwest of Emalahleni. The aim of the study is to determine the scope of archaeological resources which could be impacted on by the proposed construction of a coal siding on the premises of Argent Station.

During the pedestrian survey on the demarcated study area and the surroundings, 14 foundations, two dilapidated buildings, the main station building, two sites of unknown purpose and two graveyards were observed. One graveyard, however, is located outside of the area demarcated for development. The rest of the sites fall within the area demarcated for development and are most likely associated with the station origins.

### Argent Station, Delmas

Because the station is older than 60 years the main station building with its associated structures are protected under the National Heritage and Resources Act, 25 of 1999. It is recommended that the main station building be left intact. Should the need exist to demolish the main station building or any of the remaining structures it is recommended that a qualified archaeologist record the sites through site drawings and photographs and apply for a destruction permit from the South African Heritage and Resources Agency (SAHRA). It is also recommended that the recommendations made in this report be revised once the layout plans for the proposed development are available.

Recommendations for the affected graveyard includes that the site be fenced-off, the fences maintained, and a conservation buffer of 15 m be placed around the graveyard. People visiting these graveyards should be allowed access. Alternatively the graves may be relocated by a professional graves relocation unit.

Due to no visible other material remains pertaining to heritage resources and subject to adherence of the recommendations development may continue on the specific portion. Should skeletal remains be exposed during development and construction phases, all activities must be suspended and the relevant heritage resources authority contacted (See National Heritage and Resources Act, 25 of 1999 section 36 (6)). Also, should culturally significant material be discovered during the course of development and construction phases, all activities must be suspended pending further investigation by a qualified archaeologist.

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# 1. Project Background

## 1.1 Introduction

Environmental Assurance (Pty) Ltd appointed the author to undertake an Archaeological study for Canyon Resources (Pty) Ltd on primarily Portion 3 of the Farm Boschkop 211 IR, Mpumalanga Province, which is located on the premises of the Argent train station (**Figures 1 & 2**). It should be noted that this study is based on the extents as indicated on the conceptual map provided by Canyon Resources (Pty) Ltd. The derived study area therefore traverses several additional farm portions: A Portion of Portion 5 and 21 of the Farm Boschpoort 211 IR, Portion 41 and a Portions of Portion 11, 42 and 43 of the Farm Dwarsfontein 209 IR, and a Portion of Portion 4 of the Farm Rondevly 208 IR (**Figure 3**). The purpose of this study is to examine the demarcated study area in order to determine if any archaeological resources of heritage value will be impacted on by the proposed construction of the Argent Coal Siding, as well as to archaeologically contextualise the general study area. The aim of this report is to provide the developer with information regarding the location of heritage resources on the portion demarcated for development.

In the following report, I discuss the implication for development on the demarcated study area of the affected portions as indicated on Figure 2 & Figure 3 with regard to heritage resources. The legislation section included serves as a guide towards the effective identification and protection of heritage resources and will apply to any such material unearthed during development and construction phases on the demarcated study area.

## 1.2 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 an impact assessment report to be submitted for development authorisation that must include an AIA if triggered.

AIAs should be done by qualified professionals with adequate knowledge to (a) identify all heritage resources that might occur in areas of development and (b) make recommendations for protection or mitigation of the impact of the sites.

### 1.2.1 The EIA and AIA processes

Phase 1 Archaeological Impact 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 Archaeological Impact Assessment reports should include:

- a. Location of the sites that are found;
- b. Short descriptions of the characteristics of each site;
- c. Short assessments of how important each site is, indicating which should be conserved and which mitigated;
- d. Assessments 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, to identify the associations of the site, may be necessary (a pre-arranged SAHRA permit is required); and
- f. Recommendations for conservation or mitigation.

This AIA report is intended to inform the client about the legislative protection of heritage resources and their significance and make appropriate recommendations. It is essential to also provide the heritage authority with sufficient information about the sites to enable the authority 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 to relocate the development in such a way as to conserve other sites; and
- f. What measures should or could be put in place to protect the sites which should be conserved.

When a Phase 1 AIA 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 AIA it will be necessary to ensure that the study addresses such issues and complies with Section 38 of the National Heritage Resources Act.

### **1.2.2 Legislation regarding archaeology and heritage sites**

*National Heritage Resource Act No.25 of April 1999*

Buildings are among 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. 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;
- books, records, documents, photographic positives and negatives, graphic material, film or video or sound recordings, excluding those that are public records as defined in section 1(xiv) of the National Archives of South Africa Act, 1996 (Act No. 43 of 1996), or in a provincial law pertaining to records or archives;

- 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 issued 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 authority:*

- (a) destroy, damage, alter, exhume or remove from its original position or otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;*
- (b) destroy, damage, alter, exhume, 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;*
- (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-*
  - i. *exceeding 5000m<sup>2</sup> in extent; or*
  - ii. *involving three or more existing erven or subdivisions thereof; or*
  - iii. *involving three or more erven or divisions thereof which have been consolidated within the past five years; or*
  - iv. *the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;*
- (d) *the re-zoning of a site exceeding 10000m<sup>2</sup> in extent; or*
- (e) *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.

## **2. Study Area and Project Description**

### **Location & Physical environment**

The closest town to the study area is Delmas, which is located 17 km to the southwest of the proposed Argent Siding. The study area falls within the Victor Khanye local municipality and the Nkangala district municipality in the Mpumalanga Province. Emalahleni, previously Witbank, is located roughly 48 km northeast of the study area. In terms of vegetation the study area falls within the Grassland Biome which is typically associated with summer rainfall regions. This Biome covers approximately 28% of South Africa. According to the vegetation classification by Mucina & Rutherford (2006) this area falls within the Eastern Highveld Grassland. This type of vegetation is characterised by short dense grassland with some sour grasses and woody species. On a local scale the vegetation consists of a combination of grass cover and well established eucalyptus patches.

The red and yellow soils in the study area are generally derived from the underlying Shale and Sandstone geology, which belong to the Madzaringwe Formation of the Karoo Supergroup (Mucina & Rutherford 2006).

The study area falls within the summer rainfall region and receives an average of 575 mm of rain per year. The lowest rainfall occurs during July and the highest during January. The average maximum temperature for the study area range from 17 °C in June to 26 °C in January. The lowest temperatures occur during July and drops to an average of 0.8 °C during the night (SA Explorer accessed 14/11/2014).

In terms of topography the general area consists of undulating hills, low hills and pan depressions. Rocky outcrops are also occasionally found. Altitudes may vary between 1520 and 1780 MASL. The elevation of the project area is 1534 MASL and is generally flat with a gradual slope from north to south.

The study area falls within the Quarternary catchment B20E. The closest river to the study area is the Wilger River which flows roughly 4 km to the east.

The current utilisation of the area demarcated for development is unknown, but formed part of the Argent Station and its associated buildings and activities while it was operational. The eastern-most section of the area demarcated for development is currently used for agricultural purposes. It should also be noted that security personnel patrol the station area on a 24h basis. The surrounding land uses include Afgri silos to the southeast, Truckers Diesel Stop and shops to the northwest, Tru Chick (Pty) Ltd and agricultural land to the north and a wetland to the south.

### **Project description**

The study area is demarcated for the construction of a coal siding which includes the construction of additional railway tracks at either end of the proposed siding (Table 1). The proposed siding borders the R555 to the north and the railway tracks to the south. Development will therefore only occur on the northern section of Argent Station (**Figure 3**). The area demarcated for development as per the application is 5.667 hectares in size (a Portion of Portion 3 of the farm Boschpoort 211 IR). The area as indicated by the conceptual layout, however, amounts to  $\pm$  13.6 hectares. Currently Canyon Resources (Pty) Ltd leases this portion from Transnet SOC Limited (Envass 2014).

The Phalanndwa opencast colliery near Delmas and the Hakhano Colliery opencast colliery near Middelburg both belong to Canyon Resources (Pty) Ltd. The goal of the proposed Argent siding will be to transport coal from the Phalanndwa Colliery, which is located roughly 5 km away. The mined coal from Phalanndwa Colliery will arrive by truck at the proposed Argent Siding, which will serve as a transfer station for the final coal product. The exact layout of the proposed infrastructure and associated activities and processes are not yet available.

The Victor Khanye local municipality employment rate increased by 28% between 2001 and 2011. Considering the economic activity present in the local municipality it is considered a high figure, but may be attributed to the migration of workers from other areas. The economically active people in the Victor Khanye local municipality consist of 8577 unemployed and 21838 employed people, adding to a total of 30415. A major employment challenge is youth unemployment, which makes up 35.8% of the unemployment figure. One possible reason for this trend might be attributed to the limited population number with tertiary education, which in turn means that they're not absorbed into the labour market. Accordingly the proposed development will significantly contribute towards socio-economic conditions of local communities as several employment opportunities will be created. Preference will be given to the locally unemployed where possible (Envass 2004).

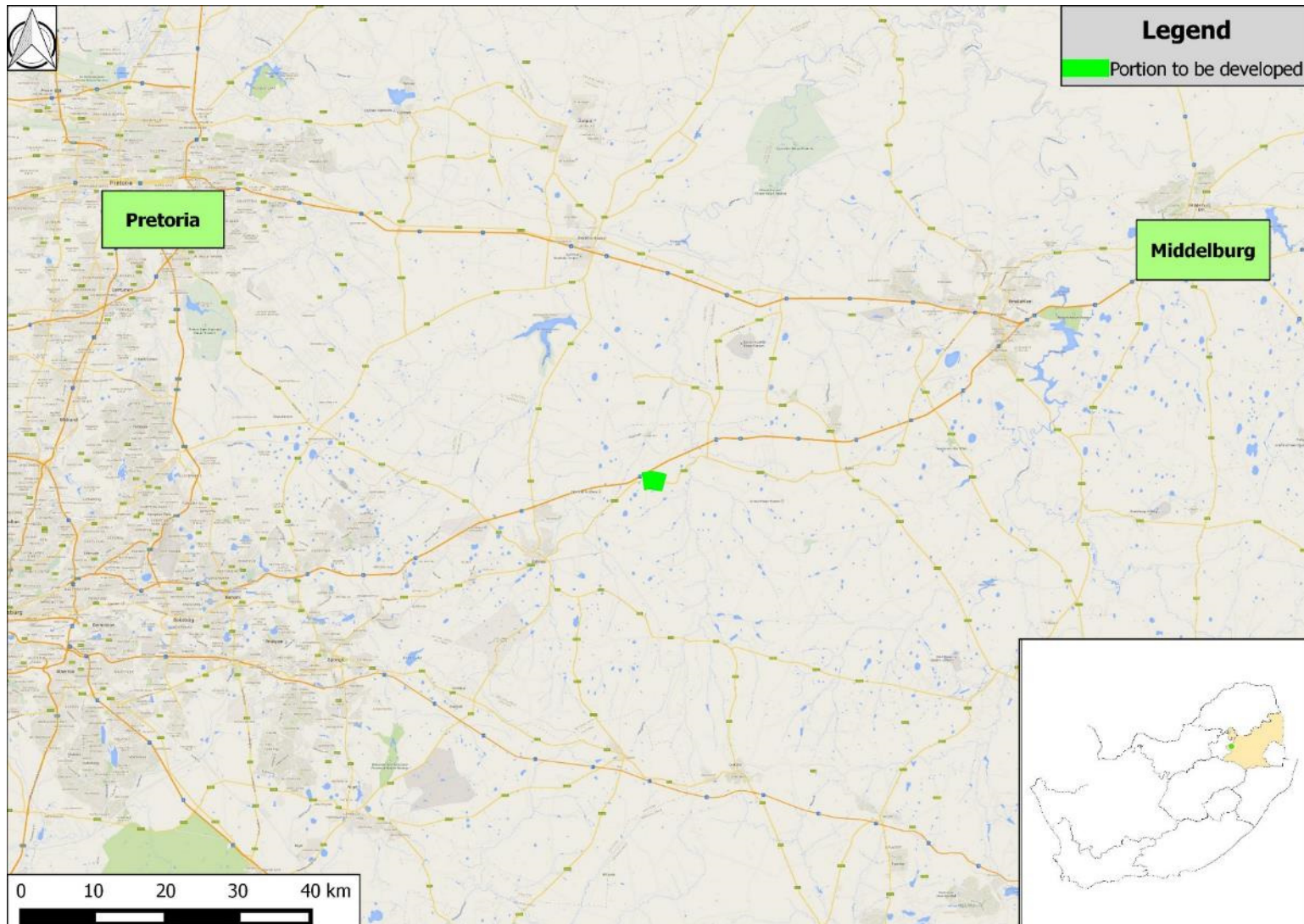
The factors contributing to the Victor Khanye local municipality economic growth for the period up to 2016 will be: Agriculture, transport, community services, finance and mining. The municipality also plays a major role in terms of maize production, while mining activities are mainly focused on coal and silica. Roughly 2 million metric tons of silica and 3 million tons of coal are mined on an annual basis in the Victor Khanye local municipality. In terms of natural resources the local municipality also significantly contributes to the Nkangala District municipality's economy. With several powers station in the general area and the new Kusile power station in the Victor Khanye area a strong possibility exists that the demand for coal reserves in the Victor Khanye local municipality will see an increase (Envass 2014).

The Victor Khanye local municipality's Integrated Development Plan identifies the potential of a number of development opportunities along the N12 corridor and suggests the furthering of economic activity in Delmas that will contribute towards economic growth in the local and district municipalities (Envass 2014).

Additionally, the increased provision of coal to surrounding power stations will add to the availability of electricity needed by local, regional as well as national communities. Accordingly society will benefit in general through the upliftment of poor communities and increased economic development. Therefore this project is aligned with the goals of the Integrated Development Plan and Spatial Development Framework of the municipality (Envass 2014).

**Table 1:** Property name & coordinates

<b>Property</b>	<b>Portion</b>	<b>Map Reference (1:50 000)</b>	<b>Coordinates</b>
Boschpoort 211 IR	3	2628BB	S: -26.063942 E: 28.820502



**Figure 1:** Regional and Provincial location of the study area.

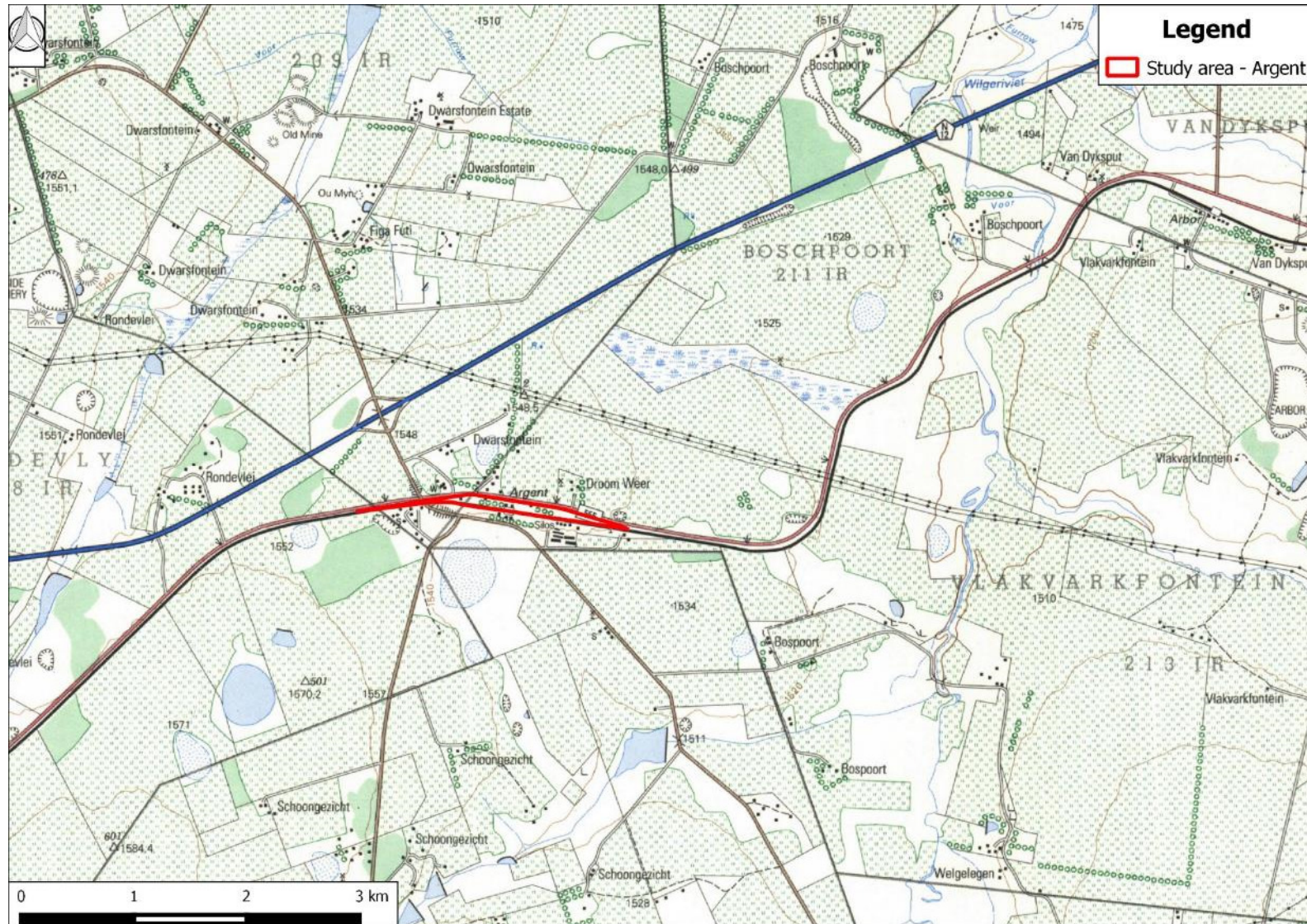


Figure 2: Segment of SA 1: 50 000 2628 BB indicating the study area.

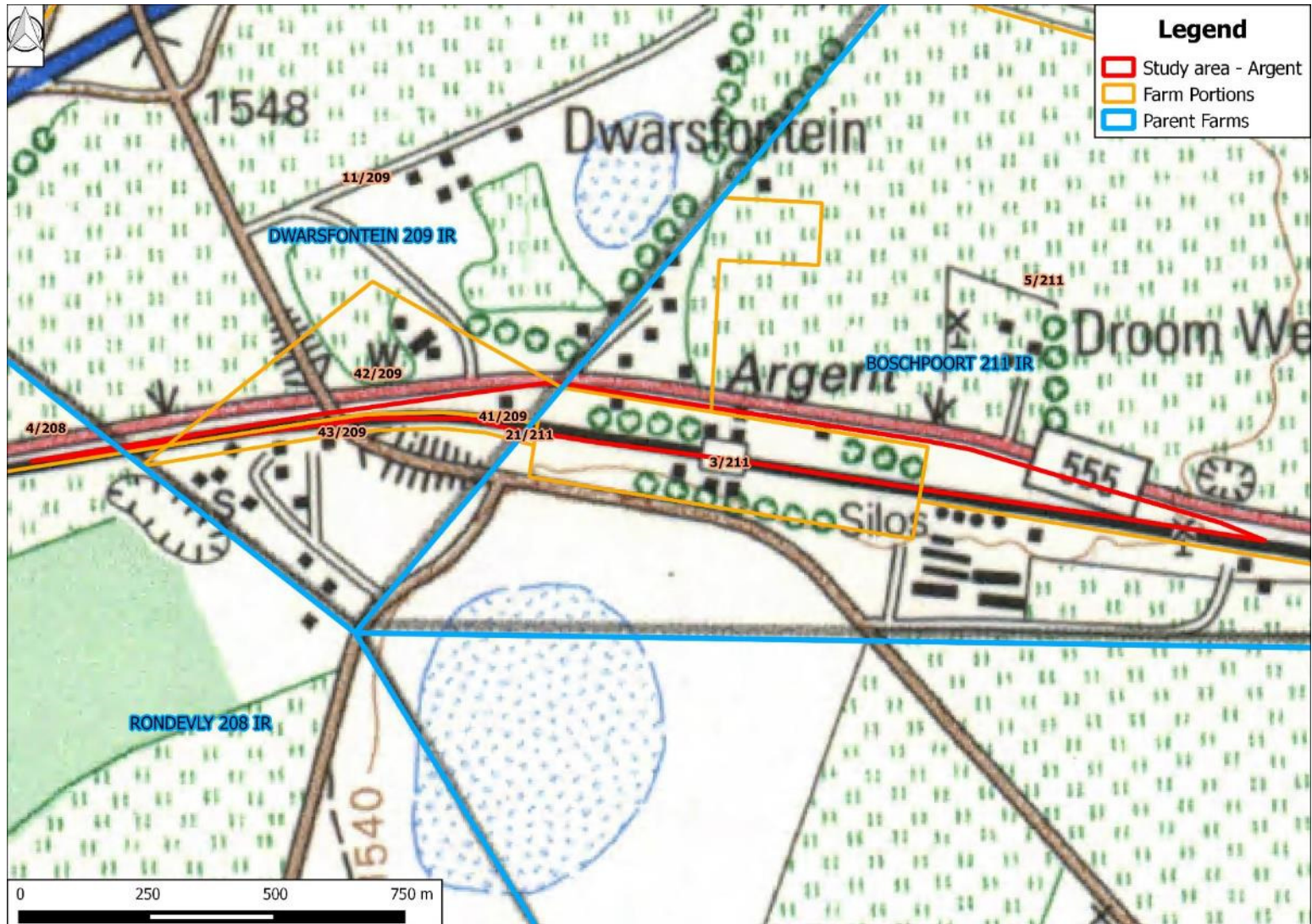


Figure 3: Study area & farm portions.

## 2.1 Archaeological Background

Southern African archaeology is broadly divided into the Early, Middle and Later Stone Ages; Early, Middle and Later Iron Ages; and Historical or Colonial Periods. This section of the report provides a general background to archaeology in South Africa and also focuses on more site specific elements where relevant.

### 2.1.1 General Archaeological Context

#### 2.1.2 The Stone Age

The earliest stone tool industry, the Oldowan, was developed by early human ancestors which were the earliest members of the genus *Homo*, such as *Homo habilis*, around 2.6 million years ago. It comprises tools such as cobble cores and pebble choppers (Toth & Schick 2007). Archaeologists suggest these stone tools are the earliest direct evidence for culture in southern Africa (Clarke & Kuman 2000). The advent of culture indicates the advent of more cognitively modern hominins (Mitchell 2002: 56, 57)

The Acheulean industry completely replaced the Oldowan industry. The Acheulian industry was first developed by *Homo ergaster* between 1.8 to 1.65 million years ago and lasted until around 300 000 years ago. Archaeological evidence from this period is also found at Swartkrans, Kromdraai and Sterkfontein. The most typical tools of the ESA are handaxes, cleavers, choppers and spheroids. Although hominins seemingly used handaxes often, scholars disagree about their use. There are no indications of hafting, and some artefacts are far too large for it. Hominins likely used choppers and scrapers for skinning and butchering scavenged animals and often obtained sharp ended sticks for digging up edible roots. Presumably, early humans used wooden spears as early as 5 million years ago to hunt small animals.

Middle Stone Age artefacts started appearing about 250 000 years ago and replaced the larger Early 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. The first *Homo sapiens* species also emerged during this period. Associated sites are Klasies River Mouth, Blombos Cave and Border Cave (Deacon & Deacon 1999).

Although the transition from the Middle Stone Age to the Later Stone Age did not occur simultaneously across the whole of southern Africa, the Later Stone Age ranges from about 20 000 to 2000 years ago. Stone tools from this period are generally smaller, but were used to do the same job as those from previous periods; only in a different, more efficient way. The Later Stone Age is associated with: rock art, smaller stone tools (microliths), bows and arrows, bored stones, grooved stones, polished bone tools, earthenware pottery and beads. Examples of Later Stone Age sites are Nelson Bay Cave, Rose Cottage Cave and Boomplaas Cave (Deacon & Deacon 1999).

### 2.1.3 The Iron Age & Historical Period

The Early Iron Age marks the movement of farming communities into South Africa in the first millennium AD, or around 2500 years ago (Mitchell 2002:259, 260). These groups were agro-pastoralist communities that settled in the vicinity of water in order to provide subsistence for their cattle and crops. Archaeological evidence from Early Iron Age sites is mostly artefacts in the form of ceramic assemblages. The origins and archaeological identities of this period are largely based upon ceramic typologies. Some scholars classify Early Iron Age ceramic traditions into different “streams” or “trends” in pot types and decoration, which emerged over time 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 until the end of the first millennium AD (Mitchell 2002; Huffman 2007). Some well-known Early Iron Age sites include the Lydenburg Heads in Mpumalanga, Happy Rest in the Limpopo Province and Mzonjani in Kwa-Zulu Natal.

The Middle Iron Age roughly stretches from AD 900 to 1300 and marks the origins of the Zimbabwe culture. During this period cattle herding appeared to play an increasingly important role in society. However, it was proved that cattle remained an important source of wealth throughout the Iron Age. An important shift in the Iron Age of southern Africa took place in the Shashe-Limpopo basin during this period, namely the development of class distinction and sacred leadership. The Zimbabwe culture can be divided into three periods based on certain capitals. Mapungubwe, the first period, dates from AD 1220 to 1300, Great Zimbabwe from AD 1300 to 1450, and Khami from AD 1450 to 1820 (Huffman 2007: 361, 362).

The Later Iron Age roughly dates from AD 1300 to 1840. It is generally accepted that Great Zimbabwe replaced Mapungubwe. Some characteristics include a greater focus on economic growth and the increased importance of trade. Specialisation in terms of natural resources also started to play a role, as can be seen from the distribution of iron slag which tend to occur only in certain localities compared to a wide distribution during earlier times. It was also during the Later Iron Age that different areas of South Africa were populated, such as the interior of KwaZulu Natal, the Free State, the Gauteng Highveld and the Transkei. Another characteristic is the increased use of stone as building material. Some artefacts associated with this period are knife-blades, hoes, adzes, awls, other metal objects as well as bone tools and grinding stones.

The Historical period mainly deals with Europe’s discovery, settlement and impact on southern Africa. Some topics covered by the Historical period include Dutch settlement in the Western Cape, early mission stations, Voortrekker routes and the Anglo Boer War.



## 2.1.4 Study area Archaeo-History

### Historical maps

An archaeological study conducted by Archaeology Africa cc on the southern side of Argent Station in 2008 employed several archival maps. These are: Bethal Sheets of the Major Jackson Series, April 1901; an untitled map possibly dating to 1913; 2628 BB Topographical Sheet, First Edition, 1958.

The Major Jackson Series maps, dating to the Anglo Boer War of 1899-1902, were produced under the supervision of Major R. M Jackson of the Royal Engineers serving under the Mapping Section of the Field Intelligence Department. As observed by Birkholtz (2008) the 1901 Bethal Sheets of the Major Jackson Series indicate no heritage features in close proximity of the study area. Two homesteads appear towards to northeast of the study area and probably were the first farmsteads of the farm Boschpoort. A number of roads are also observed traversing the study area (Birkholtz: 2008: 7-8).

According to Birkholtz (2008) the untitled archival map conforms to the 1:125 000 scale topographical maps undertaken of the Free State and Transvaal during c. 1913. It should also be noted that the archival file (JUS, 560, 185/30) in which the map was found dates to 1924. This map indicated the railway line between Germiston and Emalhaleni for the first time. Argent station is also indicated for the first time. The same two homesteads are depicted as on the Major Jackson series map with no additional heritage features visible (Birkholtz 2008: 7-8).

The first edition 2628 BB Topographical sheet of 1958 was compiled from aerial photographs taken in 1958. Actual surveys, however, were undertaken in 1965. The map series was drawn in 1966 by the Trigonometrical Survey Office. This map sheet indicates several 'huts' in the general vicinity, a shop to the northwest, a farmstead to the northeast, as well as several unidentified buildings in the general area (Birkholtz 2008: 10). Important to note here is that the concerned map indicates several buildings on the northern side of the railway tracks on the area currently demarcated for development. These buildings, however, are shown as being located close to the road bordering the study area to the north.

### Farm history

The farm history as researched by Archaeology Africa cc is described in this section.

According to Birkholtz (2008: 11) the farm Boschpoort was first numbered as 236 of the Pretoria District, then 30 and is presently numbered as 211 IR. The farm was first inspected on 27 December 1864 by J. F Muller. On 15 August 1866 the farm, 3133 acres in extent, was transferred to Jan Hendrik Coetzee by the Government. J. H. Coetzee in turn transferred a portion of the farm to Magdalena Josina Johanna Prinsloo and Jochem

Jahannes Prinsloo on 19 September 1872. J. H Coetzee transferred another portion to Dirk Jacobus Gerhardus Stephanus Coetzee on the same day.

Dirk Jacobus Gerhardus Stephanus Coetzee, however, transferred his portion to Andries Johannes Coetzee and Willem Petrus Prinsloo, also on 19 September 1872. Three years later, on 14 May 1875, A. J. Coetzee transferred his portion to W. P. Prinsloo. Magdalena Josina Johanna Prinsloo and J. J. Prinsloo transferred their portions to Willem Petrus Prinsloo on 30 May 1878 (Birkholtz 2008: 11).

The original farm owner, J. H. Coetzee, transferred another 1371 acres of land to Andries Hendrik Erasmus and Daniel Jacobus Elardus Erasmus on 11 December 1878. Andries Hendrik Erasmus, however, transferred his portion to D. J. E. Erasmus on the 17<sup>th</sup> of February 1883. On 17 May 1913 the land of D. J. E. Erasmus was transferred to Albert James Shimwell (Birkholtz 2008: 11).

Farm portions 4, 5, and 6 were consolidated into portion 11 on the 13<sup>th</sup> of December 1915. The certificate of amalgamated title was transferred to Willem Petrus Prinsloo. On the 12<sup>th</sup> of May 1916 W. P. Prinsloo donated a portion to Louwrens Abraham Prinsloo. Portion 11 was transferred to the Government of the Union of South Africa on 23 September 1916 (Birkholtz 2008: 11).

Albert James Shimwell transferred his portion to The Shimwell Trust (Pty) Ltd on the 18<sup>th</sup> of May 1943. The Estate of L. A. Prinsloo was transferred to Erasmus Albertus van der Merwe on the 1<sup>st</sup> of June 1945. The Shimwell Trust transferred their portion to Nathan Wolman on 3 June 1946 (Birkholtz 2008: 11).

### **The study area & the Anglo Boer War**

According to the study done by Birkholtz (2008) a skirmish took place between Boer and British forces on the farm Mooimeisjesfontein on the 17<sup>th</sup> of October 1901. Accordingly a farm by this name is located on the opposite side of the farm Vlakvarkfontein, which is located to the southeast of the farm Boschpoort. During this skirmish Major F. C. Mishull-Ford D.S.O and trooper Mark Crampton, both members of the South African Constabulary, were killed. Allegedly they were buried on the farm Boschpoort. A letter by W. F. McDonald to the Sunday Times on 11 August 1912 raised concerns regarding the poor state of the graves. The honorary secretary of the South African Constabulary Association, B. M. S Williams, inspected the graves on the 12<sup>th</sup> of August 1912 and concluded that the allegations were false. The graves were in fact well maintained by the Women's Guild (Birkholtz: 2008: 13).

The report by B. M .S. Williams was published in the Sunday Times on 25 August 1912. He identified the graves located by McDonald as debris from an abandoned hut occupied by the South African Constabulary 15 miles to the north of the actual graves. Accordingly the confusion resulted from the fact that the iron crosses

were removed from the original graves when the families of the deceased decided to erect a monument. The crosses were taken to the hut for safekeeping. The actual graves were located in the fenced-off Boschpoort cemetery (Birkholtz: 2008: 13).

According to Birkholtz (2008: 13) the Genealogy Society of South Africa states that the grave of Mishull-Ford was located near Arbor Station on the farm Boschpoort but was later exhumed and re-entered at Rietfontein near Brits. This cemetery was associated with the Rietfontein Military Camp and Hospital near present day Ifafi.

Birkholtz (2008) observed that a grave is indicated on the first edition of the 2628 BB Topographical Sheet in the vicinity of the earliest farmsteads. This area is approximately four kilometres northeast of the study area. Birkholtz (2008) deems this a likely location for the burial of Munshill-Ford and Crampton. Although the grave of Munshill-Ford was relocated to Rietfontein Cemetery, little evidence exist for the whereabouts of Crampton's grave. It is therefore possible that his grave is still located on the farm.

### **Argent Station**

Argent Station is indicated for the first time on the untiled map which is believed to date to 1913 (Birkholtz 2008). The railway line between Witbank and Apex Junction, located between Boksburg and Brakpan, was completed between 1906 and 1910 and adds to the credibility of this date (Bergh 1998). Also, a letter written by L. Albu, chairman of the General Mining and Finance Corporation Limited, dating to 28 December 1921 mentions the application of a siding between Argent Station and the plant of the Transvaal Silver and Base Metals Limited. In this regard it can be assumed that Argent Station was built between 1906 and 1913 (Birkholtz 2008: 14).

A sketch found in an archival file dealing with the application to subdivide the farm Boschpoort indicate that the railway station and its associated buildings are located on the northern side of the railway tracks (Birkholtz 2008: 14) and therefore on the area demarcated for development. A post office and shop were also opened at Argent Station in 1929 (Birkholtz 2008: 14).

Several complaints were raised during 1972 regarding a compound housing  $\pm$  300 black employees of the railways at Argent Station. The complaints regarded the abuse of alcohol, vagrants, unauthorised people sleeping there and the occurrence of crimes such as assault and murder. The compound consisted of corrugated iron huts enclosed with fences on three sides. It is believed that the compound fell under the supervision of the compound manager at Kaserne or the railway inspector at Ogies (Birkholtz 2008: 14).

### **Delmas Cooperative**

Pickard & Kirstein, a law firm operating out of Delmas, made an application on 22 June 1959 on behalf of Delmas Koöperasie Beperk to allow a grain depot on portion 10 (a portion of portion 5) of the farm Boschpoort. On 25 August 1959 Mr. H. Mathee, Director of Local Government, granted permission (Birkholtz 2008: 15).

## **3. Methodology**

I conducted archaeological reconnaissance of the study area through a systematic pedestrian site survey (**Figure 30**). The transects were spaced roughly 25 m apart and possible sites were recorded via GPS (Global Positioning System) location and photographic record (Table 3). Although according to the application development will only occur on Portion 3 of the Farm Boschpoort 211 IR and on the northern side of the railway tracks, the surrounding area was surveyed as well as indicated on the conceptual layout map. This was done in order to determine whether there are any heritage resources that might be impacted on by the proposed development. The total area surveyed, therefore, was 13.6 hectare. This is roughly 8 hectare larger than the demarcated Portion of Portion 3. It should also be noted that the eastern-most section of the study area consists of agricultural land and was therefore not surveyed, except for the area between the railway tracks and the said agricultural land.

The reconnaissance of the area under investigation served a twofold purpose:

- To obtain an indication of heritage material found in the general area as well as to identify or locate archaeological sites on the area demarcated for development. This was done in order to establish a heritage context and to supplement background information that would benefit developers through identifying areas that are sensitive from a heritage perspective.
- 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 during the site visit.

### **3.1 Sources of information**

At all times during the survey I followed standard archaeological procedures for the observation of heritage resources. As most archaeological material occurs in single or multiple stratified layers beneath the soil surface, I paid special attention to disturbances; both man-made such as roads and clearings, and those made by natural agents such as burrowing animals and erosion. I recorded locations of archaeological material remains by means of a Garmin Oregon 550 GPS and photographed these sites as well as general conditions on the terrain with a Sony Cyber-shot camera.

I conducted a literature study, which incorporated previous work done in the region, in order to place the study area into context from a heritage perspective.

Personal communication with one of the elderly residents in the area, Mr. Solomon Nglovu, confirmed the findings made during the survey and also that no additional sites exist on the area demarcated for development.

### 3.2 Limitations

The vegetation on the study area consists mainly of grasslands and eucalyptus patches (**Figures 4 - 7**). The general visibility was good during the time of surveying since the area was recently burnt (November 2014).



**Figure 4:** Environment from the western most point along the railway tracks.



**Figure 5:** Environment from a western perspective in the vicinity where development will occur.



**Figure 6:** Environment from the eastern-most point of the study area.



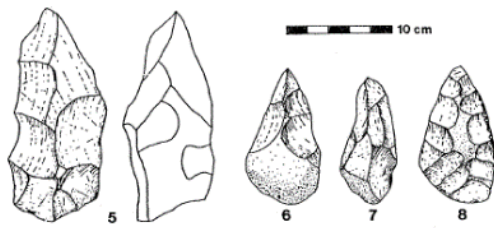
**Figure 7:** General site conditions.

## **4. Archaeological and Historical Remains**

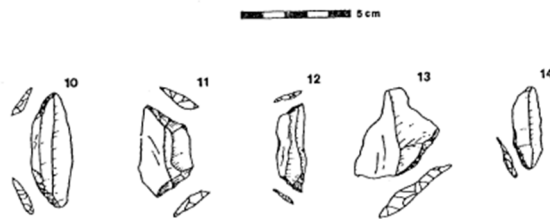
### **4.1 Stone Age Remains**

I found no Stone Age archaeological remains on the demarcated study area.

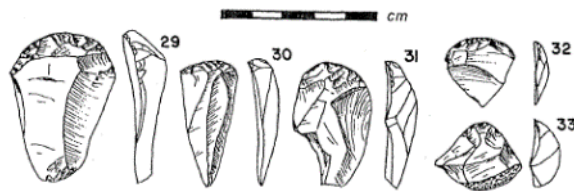
Although I located no Stone Age archaeological remains, such artefacts may occur in area. These artefacts are often associated with rocky outcrops or water sources. **Figures 8 - 10** below are examples of stone tools often associated with the Early, Middle and Later Stone Age of southern Africa.



**Figure 8:** ESA artefacts from Sterkfontein (Volman 1984)



**Figure 9:** MSA artefacts from Howiesons Poort (Volman 1984)



**Figure 10:** LSA scrapers (Klein 1984)

## 4.2 Iron Age Farmer Remains

I found no Iron Age Farmer archaeological remains on the demarcated study area. Also, no such remains were identified by the study conducted by Archaeology Africa on the southern section of the railway tracks (Birkholtz 2008).

## 4.3 Historical Remains

I located several structures dating to the Historical period on the area demarcated for development (**Figure 30**). The study conducted by Archaeology Africa on the southern side of the railway tracks located no remains dating to the historical period. However, during the course of their study they identified that the structures on the northern side of the railway tracks date to the historical period as it is directly related to the building of Argent Station between 1906 and 1913 (Birkholtz 2008).



The following sites share similar characteristics and are therefore discussed together:

**Table 2:** Sites indicated as 'Foundation' on the site map

Site	Size (m)	Figure
AR 02	3 x 4	Figure 11
AR 04	10 x 4	Figure 12
AR 06	2 x 2	Figure 13
AR 07	3 x 3	Figure 14
AR 08	4 x 2.5	Figure 15
AR 11	19 x 5	Figure 16
AR 12	8 x 12	Figure 17
AR 13	16 x 10	Figure 18
AR 14	8 x 3	Figure 19
AR 15	16 x 10	Figure 20
AR 16	1.5 x 3	Figure 21
AR 17	16 x 10	Figure 22
AR 18	1.5 x 3	Figure 23
AR 19	16 x 10	Figure 24

All that remain of these sites, indicated on Figure 31 as 'Foundation', are concrete slabs or foundations. In most cases the purpose of these structures are not clear but they were probably associated with Argent Station during early years.

The sites AR 10 and AR 20 indicate building remains of which the brick walls are still partially intact. These buildings indicate several rooms and are marked as 'Building' on the site map. AR 10 is about 20 x 17 m (**Figure 25**). AR 20 is about 8 x 3.5 m (**Figure 26**).

The site AR 03 is the main Argent Station Building and is still in a relatively good condition (**Figure 27**). This building is surrounded by steel palisade perimeter protection which were erected as a result of vandalism.

Two sites, AR 05 (**Figure 28**) and AR 09 (**Figure 29**), indicate stacked stones. AR 05 consists of two rows of stacked stone crossing what appears to be a small stream. Its use might therefore relate to directing water flow. AR 09, on the other hand, indicates an oval shaped formation of stacked stones with an upright stone on the northern side. The use of this feature is unknown.

It should also be noted that the building to the far left of the study area as indicated on the site map has completely been demolished. Because the section of the study area where these remains area located can be associated with the initial Argent Station there is a high probability that these remains are older than 60 years and are therefore protected under the National Heritage Resources Act, 25 of 1999. All the observed sites are located on portion 3 of the farm Boschpoort 211 IR.



**Figure 11: AR 02.**



**Figure 12: AR 04.**



**Figure 13: AR 06.**



**Figure 14: AR 07.**



**Figure 15:** AR 08.



**Figure 16:** AR 11.



**Figure 17:** AR 12.



**Figure 18:** AR 13.



**Figure 19: AR 14.**



**Figure 20: AR 15.**



**Figure 21:** AR 16.



**Figure 22:** AR 17.



**Figure 23:** AR 18.



**Figure 24:** AR 19.





**Figure 25:** AR 10.



**Figure 26:** AR 20.



**Figure 27:** AR 03.



**Figure 28:** AR 05.



Figure 29: AR 09.

#### 4.4 Recent remains

I located no features which can be clearly identified as of recent origin.

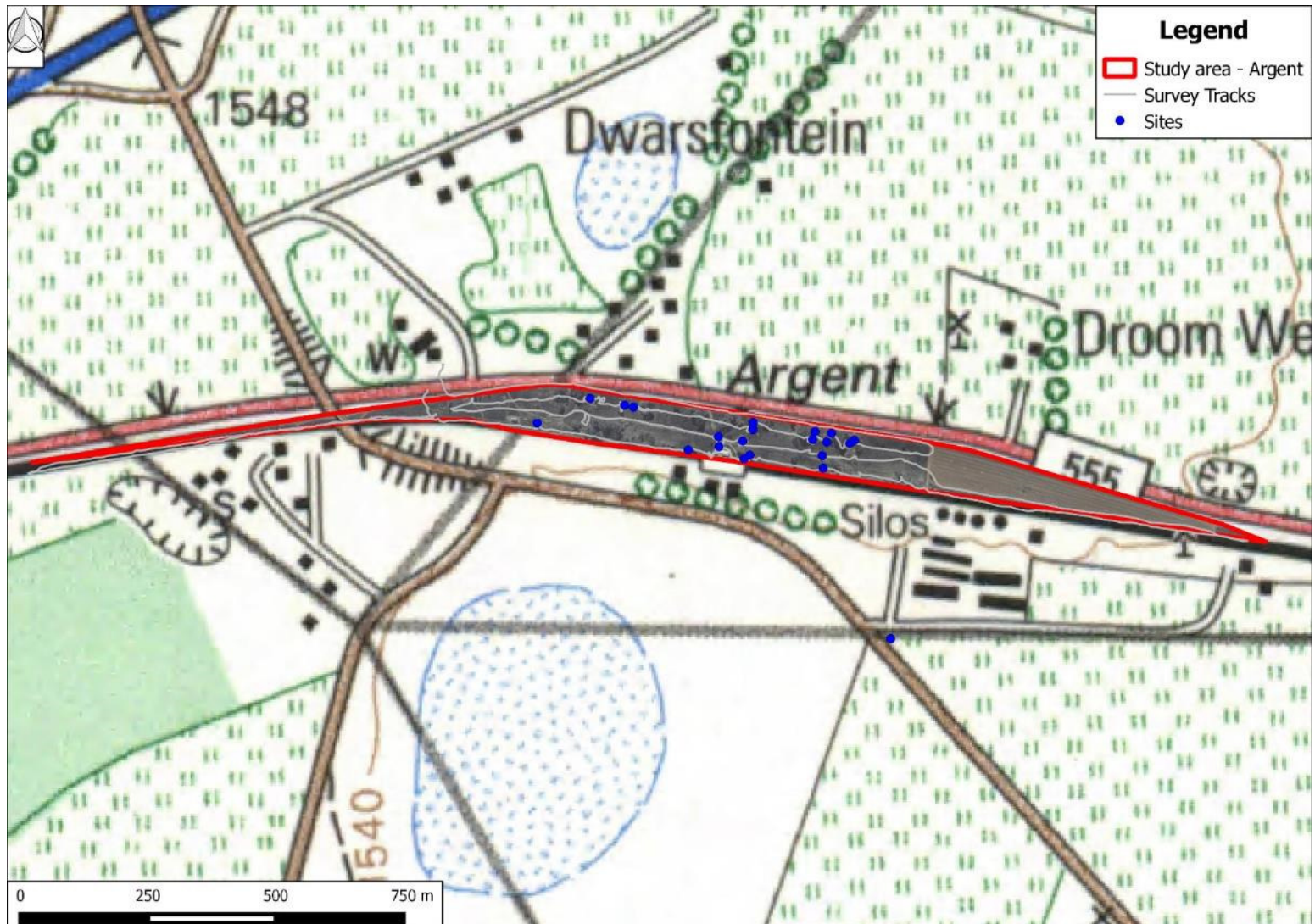


Figure 30: Site distribution with survey tracks.

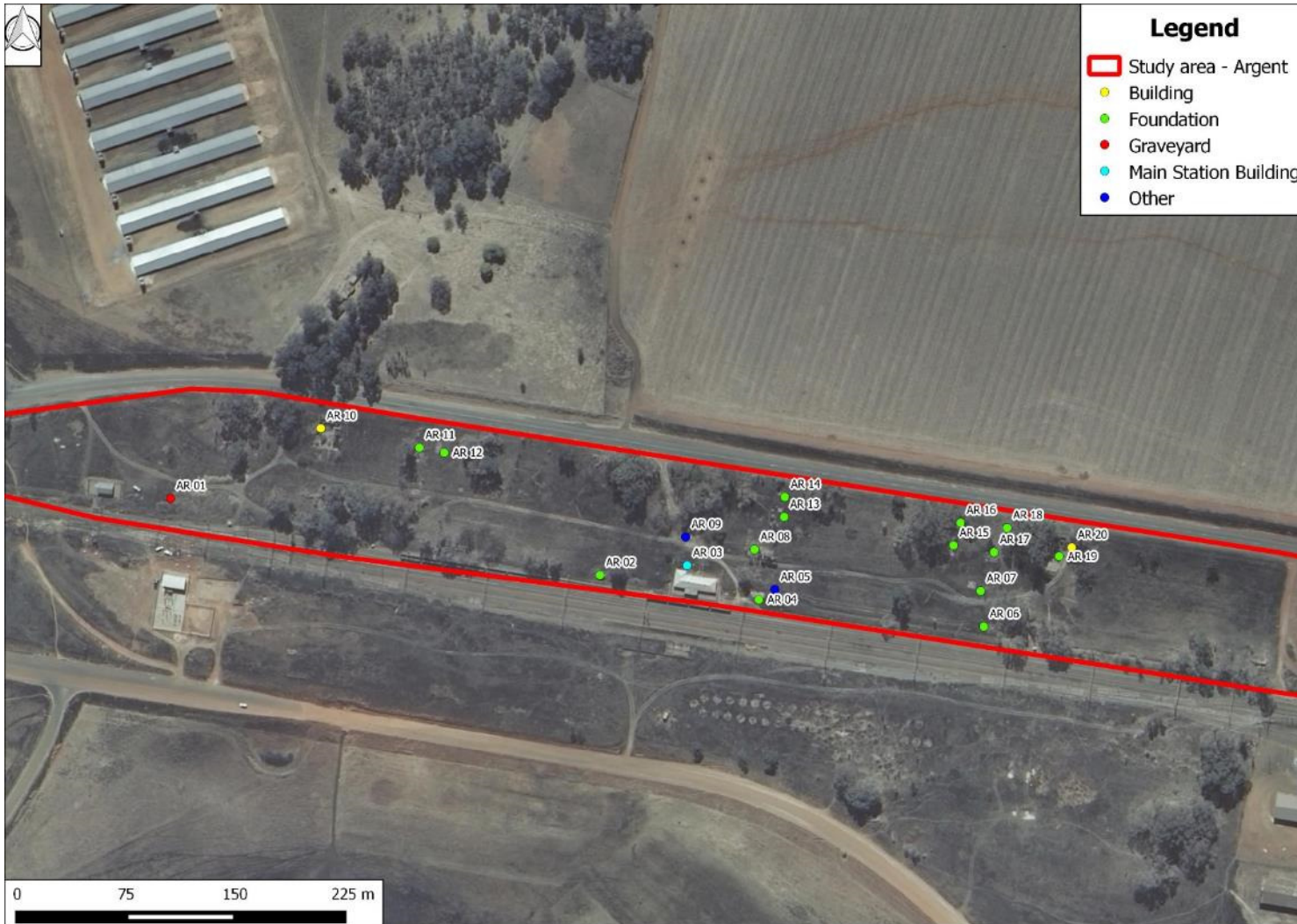


Figure 31: Site map.

**Table 3:** Site and Survey Points coordinates

Site / Survey Point Name	Type	Longitude	Latitude
AR 01	Graveyard	28.817111	-26.063676
AR 02	Foundation	28.820065	-26.064156
AR 03	Main Station Building	28.820664	-26.064096
AR 04	Foundation	28.821157	-26.064309
AR 05	Other	28.821267	-26.064247
AR 06	Foundation	28.822704	-26.064479
AR 07	Foundation	28.822683	-26.064258
AR 08	Foundation	28.821128	-26.063998
AR 09	Other	28.820654	-26.06392
AR 10	Building	28.818146	-26.063242
AR 11	Foundation	28.818824	-26.063363
AR 12	Foundation	28.818995	-26.063394
AR 13	Foundation	28.821332	-26.063796
AR 14	Foundation	28.821337	-26.063672
AR 15	Foundation	28.822497	-26.063974
AR 16	Foundation	28.822545	-26.063834
AR 17	Foundation	28.822775	-26.064017
AR 18	Foundation	28.822866	-26.063866
AR 19	Foundation	28.823223	-26.064043
AR 20	Building	28.82331	-26.063988
AR 21	Graveyard	28.82402	-26.067494

#### 4.5 Graves

One graveyard was located on the area demarcated for development (AR 01). The graveyard consists of two graves and is not fenced-off and is located roughly 20 m from the railway tracks towards the western side of the area demarcated for development (**Figures 32 – 34**). Both graves are orientated in an east-west direction and have been damaged. Only one of the graves has a visible inscription:

Hier rus Elizabeth Hester De Beer  
Geb: 7 Des 1949  
Orl: 13 Jan 1950

Another Graveyard (AR 21) was located to the south of the study area. This graveyard was also mentioned in the study done by Birkholtz (2008) and falls outside of the area demarcated for development (**Figure 35**). This graveyard is also indicated on Figure 30 as the site furthest to the south.



**Figure 32:** AR 01 as seen from the southeast.



**Figure 33:** AR 01 from an eastern perspective.



Figure 34: Close-up of one of the graves at AR 01.



Figure 35: AR 21.



## 5. Evaluation

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. Because the findings on the study area is older than 60 years, it is of significance from a heritage perspective. However, the majority of the buildings have been destroyed and only the foundations remain. The building in the best condition is the main station building. This is probably the case because of the steel palisades that were erected around its perimeter.

### 5.1 Field Rating

All sites should include a field rating in order to comply with section 38 of the National Heritage Resources Act (Act No. 25 of 1999). The field rating and classification in this report is prescribed by SAHRA.

**Table 4:** 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

**Table 5:** Individual site rating

Site / Survey Point Name	Type	Rating	Field Rating/Grade	Significance	Recommendation
AR 01	Graveyard	Local	Grade 3 A	High	Mitigation not advised
AR 02	Foundation	General Protection B	4 B	Medium	Record site
AR 03	Main Station	Local	Grade 3 A	High	Mitigation not advised
AR 04	Foundation	General Protection B	4 B	Medium	Record site
AR 05	Other	General Protection B	4 B	Medium	Record site
AR 06	Foundation	General Protection B	4 B	Medium	Record site
AR 07	Foundation	General Protection B	4 B	Medium	Record site
AR 08	Foundation	General Protection B	4 B	Medium	Record site
AR 09	Other	General Protection B	4 B	Medium	Record site
AR 10	Building	General Protection B	4 B	Medium	Record site
AR 11	Foundation	General Protection B	4 B	Medium	Record site
AR 12	Foundation	General Protection B	4 B	Medium	Record site
AR 13	Foundation	General Protection B	4 B	Medium	Record site
AR 14	Foundation	General Protection B	4 B	Medium	Record site
AR 15	Foundation	General Protection B	4 B	Medium	Record site
AR 16	Foundation	General Protection B	4 B	Medium	Record site
AR 17	Foundation	General Protection B	4 B	Medium	Record site
AR 18	Foundation	General Protection B	4 B	Medium	Record site
AR 19	Foundation	General Protection B	4 B	Medium	Record site
AR 20	Building	General Protection B	4 B	Medium	Record site
AR 21	Graveyard	Local	Grade 3 A	High	Mitigation not advised

## 6. Statement of Significance & Recommendations

### 6.1 Statement of significance

#### **The study area demarcated for the development of the Argent Siding as indicated on Figure 3**

I observed several structures on the area demarcated for development as well as two graves. The general area demarcated for the development of the Argent Siding was initially utilised by Argent Station. This includes the main station building as well as other buildings in the vicinity associated with the station. The station and its associated buildings are significant from a heritage perspective, although the majority are severely dilapidated and only foundations remain. All the observed sites are located on portion 3 of the Farm Boschpoort 211 IR, except for the graveyard located to the south of the study area (AR 21).

## 6.2 Recommendations

The following recommendations are made in terms with the National Heritage Resources Act (25 of 1999) in order to avoid the destruction of heritage remains in areas demarcated for development:

- It is recommended that should the need arise to demolish any of the sites marked as 'Foundation' and 'Building' on Figure 31 (AR 02, 04, 06, 07, 08 and AR 10 – 20) a destruction permit must be obtained from the National Heritage Resources Agency and the site be recorded by a qualified archaeologist through site drawings and photographs.
- The main station building (AR 03) should be left intact and the steel palisade perimeter protection used as a conservation buffer. It is also advised that this building be inspected on a regular basis by the Environmental Control Officer via photographic record in order to determine whether any damage occurred as a result of the proposed development. However, should the need arise to demolish the main station building a destruction permit must be obtained from the National Heritage Resources Agency and the site be recorded by a qualified archaeologist through site drawings and photographs.
- Because the function of site AR 05 is unknown it is recommended that this site be recorded by a professional archaeologist via photographic record and site plan prior to destruction.
- Should the site AR 09 be impacted on it is recommended that the site be recorded by a professional archaeologist via photographic record and site plan. Also, a qualified archaeologist should be on site during the destruction process in order to monitor the damage of any potential heritage resources.
- The graveyard located on the study area, AR 01, should be fenced-off and a conservation buffer of 15 m be placed around the graveyard. Alternatively the affected graves may be relocated by a qualified graves relocation unit to a premises earmarked by the local municipality, but will set in motion a substantial process as new legislation will be triggered. It should be noted that access must be allowed to the fenced-off graveyard. These processes, however, must be performed in accordance with the involvement of the relatives of the deceased.
- It is also advised that a qualified archaeologist revise the recommendations made in this report once the exact layout and associated processed of the proposed Argent Siding are available.
- Because archaeological artefacts generally occur below surface, the possibility exists that culturally significant material may be exposed during the development and construction phases, in which case all activities must be suspended pending further archaeological investigations by a qualified archaeologist.

Also, should skeletal remains be exposed during development and construction phases, all activities must be suspended and the relevant heritage resources authority contacted (See National Heritage Resources Act, 25 of 1999 section 36 (6)).

- Should the need arise to expand the development beyond the surveyed area mentioned in this study, the following applies: a qualified archaeologist must conduct a full Phase 1 Archaeological Impact Assessment (AIA) on the sections beyond the demarcated areas which will be affected by the expansion, in order to determine the occurrence and extent of any archaeological sites and the impact development might have on these sites.
- From a heritage point of view, development may proceed on the demarcated portion, subject to the abovementioned conditions and recommendations.

## 7. Addendum: Terminology

### **Archaeology:**

The study of the human past through its material remains.

### **Artefact:**

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

### **Assemblage:**

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

### **Context:**

An artefact'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 artefacts (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 salvage 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 other material covering and accompanying it.

### **Feature:**

An irremovable artefact; e.g. hearths or architectural elements.

**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 artefacts 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 artefacts, features, structures, and organic and environmental remains, as the residue of human activity.

**Surface survey:**

There are two kinds: (1) unsystematic and (2) systematic. The former involves field walking, i.e. scanning the ground along one's path and recording the location of artefacts 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 ally, thus making the recording of finds more accurate.

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