

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

**BASIC HIA REPORT FOR THE PROPOSED  
ADDENDUM TO THE EXISTING NELSPRUIT QUARRY  
ON THE REMAINING EXTENT OF THE FARM KIA ORA 139-JU IN NELSPRUIT, CITY OF  
MBOMBELA LOCAL MUNICIPALITY, MPUMALANGA EMP (MP/30/5/1/2/2/117 MR)**

For:

***Lafarge Mining South Africa (Pty) Ltd***

REPORT: **APAC019/15**

by:

***A.J. Pelser***  
***Accredited member of ASAPA***

***February 2019***

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

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

**©Copyright**

**APELSE ARCHAEOLOGICAL CONSULTING**

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

**DISCLAIMER:**

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

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

A handwritten signature in black ink, appearing to be 'A. Pelser', is centered below the disclaimer text.

## SUMMARY

A Pelsers Archaeological Consulting (APAC) was appointed by Lafarge Mining South Africa (Pty) Ltd to conduct a Basic HIA for the proposed Addendum to the Existing Nelspruit Quarry on the Remaining Extent of the farm Kia Ora 139-JU in Nelspruit, City of Mbombela Local Municipality, Mpumalanga EMP (MP/30/5/1/2/2/117 MR).

The Draft Basic Assessment Report (drafted and submitted to Pear Environmental (Pty) Ltd) for this proposed addendum was submitted to SAHRA (Case ID#13181). SAHRA then requested in their Interim Comment Letter dated to 23 November 2018 that a Heritage Assessment be undertaken and a report submitted.

Background research indicates that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. As the study area (both the existing Quarry and new quarry area) has been extensively disturbed by quarrying operations it is believed that a physical assessment will not be required. If any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance did exist here in the past it would have been extensively disturbed or destroyed as a result. Information on the proposed addendum and photographic evidence of the physical study areas were provided to the Heritage Specialist by Pear Environmental and Lafarge.

The results of the desktop research for this Basic HIA will be discussed in this report and recommendations on the way forward provided at the end. Finally the report will be submitted to SAHRA and Exemption from a Full HIA be requested based on the results of the basic assessment.

**Finally, from a Heritage point of view, it is recommended that the proposed Addendum to the Existing Nelspruit Quarry on the Remaining Extent of the farm Kia Ora 139-JU in Nelspruit, City of Mbombela Local Municipality, Mpumalanga be allowed, taking into consideration the recommendations put forward at the end of the report.**

## CONTENTS

1. INTRODUCTION .....	5
2. TERMS OF REFERENCE .....	5
3. LEGISLATIVE REQUIREMENTS .....	6
4. METHODOLOGY .....	9
5. DESCRIPTION OF THE AREA .....	9
6. DISCUSSION .....	12
7. CONCLUSIONS AND RECOMMENDATIONS .....	21
8. REFERENCES .....	23
APPENDIX A: DEFINITION OF TERMS:.....	24
APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE.....	25
APPENDIX C: SIGNIFICANCE AND FIELD RATING: .....	26
APPENDIX D: PROTECTION OF HERITAGE RESOURCES:.....	27
APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES.....	28

## **1. INTRODUCTION**

A Pelser Archaeological Consulting (APAC) was appointed by Lafarge Mining South Africa (Pty) Ltd to conduct a Basic HIA for the proposed Addendum to the Existing Nelspruit Quarry on the Remaining Extent of the farm Kia Ora 139-JU in Nelspruit, City of Mbombela Local Municipality, Mpumalanga EMP (MP/30/5/1/2/2/117 MR).

The Draft Basic Assessment Report (drafted and submitted to Pear Environmental (Pty) Ltd) for this proposed addendum was submitted to SAHRA (Case ID#13181). SAHRA then requested in their Interim Comment Letter dated to 23 November 2018 that a Heritage Assessment be undertaken and a report submitted.

Background research indicates that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. As the study area (both the existing Quarry and new quarry area) has been extensively disturbed by quarrying operations it is believed that a physical assessment will not be required. If any sites, features or material of cultural heritage (archaeological and/or historical) origin or significance did exist here in the past it would have been extensively disturbed or destroyed as a result. Information on the proposed addendum and photographic evidence of the physical study areas were provided to the Heritage Specialist by Pear Environmental and Lafarge.

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

## **2. TERMS OF REFERENCE**

The Terms of Reference for the study was to:

1. Identify all objects, sites, occurrences and structures of an archaeological or historical nature (cultural heritage sites) located on the portion of land that will be impacted upon by the proposed development;
2. Assess the significance of the cultural resources in terms of their archaeological, historical, scientific, social, religious, aesthetic and tourism value;
3. Describe the possible impact of the proposed development on these cultural remains, according to a standard set of conventions;
4. Propose suitable mitigation measures to minimize possible negative impacts on the cultural resources;
5. Review applicable legislative requirements;

### **3. LEGISLATIVE REQUIREMENTS**

Aspects concerning the conservation of cultural resources are dealt with mainly in two acts. These are the National Heritage Resources Act (Act 25 of 1999) and the National Environmental Management Act (Act 107 of 1998).

#### **3.1. The National Heritage Resources Act**

According to the above-mentioned act the following is protected as cultural heritage resources:

- a. Archaeological artifacts, structures and sites older than 100 years
- b. Ethnographic art objects (e.g. prehistoric rock art) and ethnography
- c. Objects of decorative and visual arts
- d. Military objects, structures and sites older than 75 years
- e. Historical objects, structures and sites older than 60 years
- f. Proclaimed heritage sites
- g. Grave yards and graves older than 60 years
- h. Meteorites and fossils
- i. Objects, structures and sites of scientific or technological value.

The National Estate includes the following:

- a. Places, buildings, structures and equipment of cultural significance
- b. Places to which oral traditions are attached or which are associated with living heritage
- c. Historical settlements and townscapes
- d. Landscapes and features of cultural significance
- e. Geological sites of scientific or cultural importance
- f. Sites of Archaeological and palaeontological importance
- g. Graves and burial grounds
- h. Sites of significance relating to the history of slavery
- i. Movable objects (e.g. archaeological, palaeontological, meteorites, geological specimens, military, ethnographic, books etc.)

A Heritage Impact Assessment (HIA) is the process to be followed in order to determine whether any heritage resources are located within the area to be developed as well as the possible impact of the proposed development thereon. An Archaeological Impact Assessment (AIA) only looks at archaeological resources. An HIA must be done under the following circumstances:

- a. The construction of a linear development (road, wall, power line, canal etc.) exceeding 300m in length
- b. The construction of a bridge or similar structure exceeding 50m in length

- c. Any development or other activity that will change the character of a site and exceed 5 000m<sup>2</sup> or involve three or more existing erven or subdivisions thereof
- d. Re-zoning of a site exceeding 10 000 m<sup>2</sup>
- e. Any other category provided for in the regulations of SAHRA or a provincial heritage authority

### **Structures**

Section 34 (1) of the mentioned act states that no person may demolish any structure or part thereof which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.

A structure means any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith.

Alter means any action affecting the structure, appearance or physical properties of a place or object, whether by way of structural or other works, by painting, plastering or the decoration or any other means.

### **Archaeology, palaeontology and meteorites**

Section 35(4) of this act deals with archaeology, palaeontology and meteorites. The act states that no person may, without a permit issued by the responsible heritage resources authority (national or provincial)

- a. destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site or any meteorite;
- b. destroy, damage, excavate, remove from its original position, collect or own any archaeological or palaeontological material or object or any meteorite;
- c. trade in, sell for private gain, export or attempt to export from the Republic any category of archaeological or palaeontological material or object, or any meteorite; or
- d. bring onto or use at an archaeological or palaeontological site any excavation equipment or any equipment that assists in the detection or recovery of metals or archaeological and palaeontological material or objects, or use such equipment for the recovery of meteorites.
- e. alter or demolish any structure or part of a structure which is older than 60 years as protected.

**The above mentioned may only be disturbed or moved by an archaeologist, after receiving a permit from the South African Heritage Resources Agency (SAHRA). In order to demolish such a site or structure, a destruction permit from SAHRA will also be needed.**

### **Human remains**

Graves and burial grounds are divided into the following:

- a. ancestral graves
- b. royal graves and graves of traditional leaders
- c. graves of victims of conflict
- d. graves designated by the Minister
- e. historical graves and cemeteries
- f. human remains

In terms of Section 36(3) of the National Heritage Resources Act, no person may, without a permit issued by the relevant heritage resources authority:

- a. destroy, damage, alter, exhume or remove from its original position of otherwise disturb the grave of a victim of conflict, or any burial ground or part thereof which contains such graves;
- b. destroy, damage, alter, exhume or remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority; or
- c. bring onto or use at a burial ground or grave referred to in paragraph (a) or (b) any excavation, or any equipment which assists in the detection or recovery of metals.

Human remains that are less than 60 years old are subject to provisions of the Human Tissue Act (Act 65 of 1983) and to local regulations. Exhumation of graves must conform to the standards set out in the **Ordinance on Excavations (Ordinance no. 12 of 1980)** (replacing the old Transvaal Ordinance no. 7 of 1925).

Permission must also be gained from the descendants (where known), the National Department of Health, Provincial Department of Health, Premier of the Province and local police. Furthermore, permission must also be gained from the various landowners (i.e. where the graves are located and where they are to be relocated to) before exhumation can take place.

Human remains can only be handled by a registered undertaker or an institution declared under the **Human Tissues Act (Act 65 of 1983 as amended)**.

### **3.2. The National Environmental Management Act**

This act states that a survey and evaluation of cultural resources must be done in areas where development projects, that will change the face of the environment, will be undertaken. The impact of the development on these resources should be determined and proposals for the mitigation thereof are made.

Environmental management should also take the cultural and social needs of people into account. Any disturbance of landscapes and sites that constitute the nation's cultural heritage should be avoided as far as possible and where this is not possible the disturbance should be minimized and remedied.



## **4. METHODOLOGY**

### **4.1. Survey of literature**

A survey of available literature was undertaken in order to place the development area in an archaeological and historical context. The sources utilized in this regard are indicated in the bibliography.

### **4.2. Field survey**

For this study no physical fieldwork was conducted and all photographic and other evidence of the situation on the ground was provided to the Heritage Specialist by the client.

### **4.3. Oral histories**

People from local communities are sometimes interviewed in order to obtain information relating to the surveyed area. It needs to be stated that this is not applicable under all circumstances. When applicable, the information is included in the text and referred to in the bibliography.

### **4.4. Documentation**

All sites, objects, features and structures identified are normally documented according to a general set of minimum standards. Co-ordinates of individual localities are determined by means of the Global Positioning System (GPS). The information is added to the description in order to facilitate the identification of each locality.

## **5. DESCRIPTION OF THE AREA**

The proposed site is located on the Remaining Extent of the Farm Kia Ora 139-JU within the City of Mbombela Local Municipality in the Mpumalanga Province of South Africa approximately 5km west of the town of Mbombela (Nelspruit), along the N4 highway.

The topography of the area surrounding the quarry is relatively flat, and has clearly been used in the past and currently for agricultural purposes. If any sites, features or material of a cultural heritage origin or significance did exist here in the past it would have been disturbed or destroyed to a large degree as a result of these activities. Similarly, the quarrying activities in the study area would have had extensive impacts on any heritage sites that might have existed here in the past.

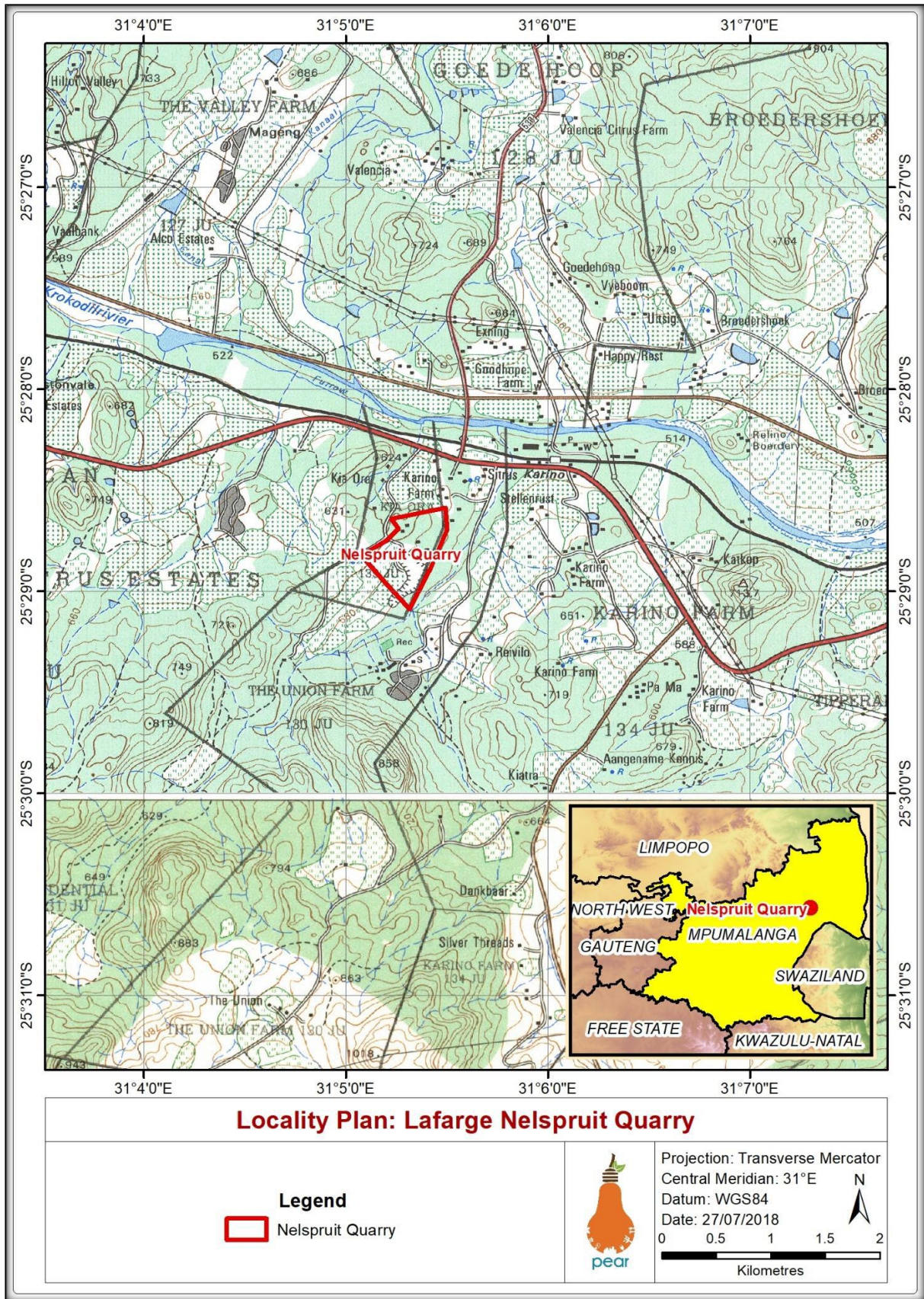
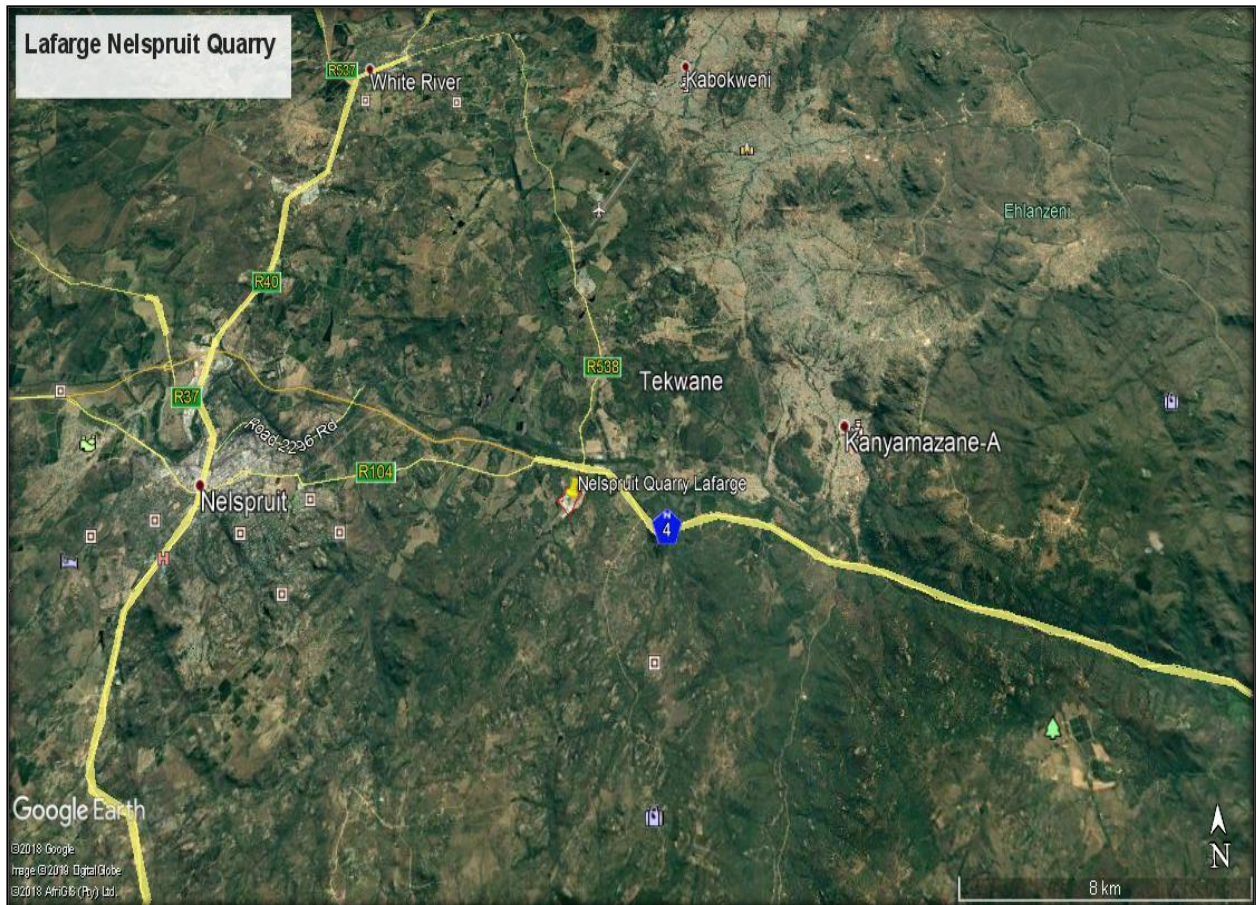


Fig.1: Locality Plan (courtesy Pear Environmental (Pty) Ltd).



**Fig.2: General location of study area (Google Earth 2019).**



**Fig.3: Closer view of Lafarge Nelspruit Quarry (Google Earth 2019). Note the agricultural fields around the area.**

## 6. DISCUSSION

The Stone Age is the period in human history when lithic (stone) material was mainly used to produce tools. In South Africa the Stone Age can be divided in basically into three periods. It is however important to note that dates are relative and only provide a broad framework for interpretation. A basic sequence for the South African Stone Age (Lombard et.al 2012) is as follows:

Earlier Stone Age (ESA) up to 2 million – more than 200 000 years ago

Middle Stone Age (MSA) less than 300 000 – 20 000 years ago

Later Stone Age (LSA) 40 000 years ago – 2000 years ago

It should also be noted that these dates are not a neat fit because of variability and overlapping ages between sites (Lombard et.al 2012: 125).

According to Bergh the closest known Late Stone Age sites, including rock art, is those found near Skukuza and Pretoriuskop in the Kruger National Park, about 60km to the east of Hazyview (Bergh 1999: 4). Peter Delius indicates that LSA sites are known near White River (Delius 2009: 28). There are no known Stone Age sites in the study area, although this might just indicate a lack of research in the larger area around it.

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

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

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

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

Iron Age sites are known near Plaston (EIA/LIA), close to White River and Hazyview (Bergh 1999: 6) and further east in the Kruger National Park (Bergh 1999: 6-7). The Plaston site date to around AD 675, and belong to the so-called Mzonjani facies of the Urewe Tradition that date to between AD450-750 (Huffman 2007: 127). Other possible Iron Age traditions (and sites related to these) that could possibly be encountered in the area include the Maguga facies of the Kalundu Tradition (AD1200-AD1450) and the Klingbeil facies of the same tradition, dating to between AD800 and AD1200 (Huffman 2007: 127; 297).

No known Iron Age (Early or Later Iron Age Stone) sites occur in the direct study area. During a heritage survey in 2011 by the author of this report near Hazyview on the farm Rochelle 606JU, and in 2013 on Ronaldsey 283KU, pieces of pottery were identified in these study areas (Pelser 2011: 14 & 2013: 16).

It was only later that Bantu-speaking tribes moved into this area from the northern parts of Southern Africa and settled here. This period is referred to as the Early Iron Age (AD 200-1500 approx.). These were presumably Sotho-Tswana herder groups. Various historians and ethnographers describe that the Lowveld was frequented by Swazi and Sotho-Tswana groups during historic times i.e. Late Iron Age times during the period AD 1500-1800 (Celliers 2012: 12). Some archaeological research was done during the 1970's at sites belonging to the EIA (Early Iron Age), at Plaston, a settlement close to White River (Celliers 2012: 31). Plaston is approximately 13km south-west of the study area. Early Iron Age pottery was also excavated by archaeologist, Prof. Tom Huffman during 1997 on location where the Riverside Government complex is currently situated. This site known as the Riverside site is situated a few kilometers north of Nelspruit next to the confluence of the Nelspruit and Crocodile River (Celliers 2012: 32).

Old trade routes was well established before the period of Colonial expansion and these routes mainly existed as a direct consequence of metallurgy and mining for iron, tin, copper and some gold to make weapons, agricultural equipment and ornaments (Bergh, 1998:103). The earliest signs of iron mining and working in the old Transvaal dates to approximately 300 AD and copper mining and working in Southern Africa may have been practiced as early as 620 AD (Bergh 1999:103; Celliers 2012:12 - 13).

These people were responsible for the establishment of large centres like Monomotapa the Zimbabwe Complex and also the famed Mapungubwe in the Limpopo valley. At around 900 AD Arab merchants established a trade post at Sofala (Beira). From the start of the 11th century, these Arabs had trade relations with the people of Zimbabwe. Textiles, porcelain and glass beads were traded for gold, ivory and other minerals. An ancient trade route passed close-by the current Nelspruit and started from Delagoabay in a westward direction through the Lowveld towards the gold fields of Lydenburg, by passing through Malalapoort, the Nkhomati and Crocodile Rivers to Skipberg in the current Kruger National Park close-by the place where Pretoriuskop Rest Camp is located. From here onwards there were two possible routes up the mountains to reach the goldfields. The first one passed by Spitskop (Sabie) and from there on to Lydenburg. The second passed south of the "Devils Knuckles" to Lydenburg. The Voortrekkers used this route in 1845 when making the wagon route between Ohrigstad and Delagoabay (Berg 1999: 104). There were also several linking routes to existing main routes, one of which started from Sabie or Lydenburg to the route which linked Delagoabay to the Soutpansberg via Pilgrim's Rest. It is also believed that a footpath existed at the foothills of the (Transvaal) Drakensberg which led around the mountain to link again with a major route alongside the Olifants River (Bergh 1999:104; Celliers 2012: 12 - 13).

In 1721 Dutch sailors reached Delagoa Bay and settled there for nine years, during this time they launched a number of expeditions inland. During August 1723 Lt. Jan Steffler and 17 men launched the first of these expeditions but they were ambushed by natives shortly after crossing the Lebombo Mountains. Exactly where they crossed the mountains is uncertain but it is possible that they were actually in northern Swaziland when they were attacked. Steffler succumbed as a result of this ambush and his followers returned to Delagoa Bay (Bergh 1999:116; Celliers 2012: 13).

A second attempt to create an inland route took place two years later in June 1725 when Francois de Cuiper and 34 men departed from Delagoa Bay and travelled in a north-western direction. They reached Gomondwane in the current Kruger National Park where they were also attacked by a local tribe. This resulted in them also having to return to Delagoa Bay. Although this attempt was also not successful it is seen as the first European intrusion into this northern area (Bergh 1999:116).

In the (Eastern Transvaal) Lowveld a sub-group of the Northern Sotho, known as the eastern Sotho, were present nearby the eastern escarpment. They are known as the Pulana, Pai (emaMbayi) and Kutswe, these people moved from northern Swaziland further northwards when Swazi expanded into this area during the mfecane (Bergh 1999:107-108). One of the recorded events relates to the attack of the Ndwane under Zwibe on the Pedi in 1825 (Bergh 1999: 114-115). This seems to have started from the Lowveld in the region of the Pretoriuskop area towards Steelpoort.

During the nineteenth century the Lowveld area of Mpumalanga was extensively settled by both Bantu and European groups that migrated into this area. Bantu migration was mainly as a result of political upheaval during the mfecane ("the crushing" in Nguni). This was a

period of bloody tribal and faction struggles in present-day KwaZulu Natal and on the Highveld area, which occurred around the early 1820's until the late 1830's (Bergh 1999). During this period, a movement of Swazi people took place to the areas north and northwest of Swaziland. As a result reports indicate that the Swazi were living in the Lowveld area by the 1840's (Bergh 1999).

Before the mfecane period (1820's) small farmer groups including the Pai and Pulana resided in the mountainous area surrounding Barberton and Nelspruit. The conflict during the mfecane, when the Swazi under Mswati II raided these smaller groups, resulted in scattered settlement of those who managed to escape the Swazi onslaught. Evidence of these scattered settlements is sometimes found in the form of small stone walled enclosures in and around Barberton, Nelspruit and onwards to the Schoemanskloof (Celliers 2012: 14).

The oldest map for the farm (of Portion 1) that could be obtained from the database of the Chief Surveyor General dates to 1984 ([www.csg.dla.gov.za](http://www.csg.dla.gov.za) – CSG Document 10F00Y01). It shows that the farm portion was surveyed in December 1984. No historical sites or features could be identified from this map in the study area.

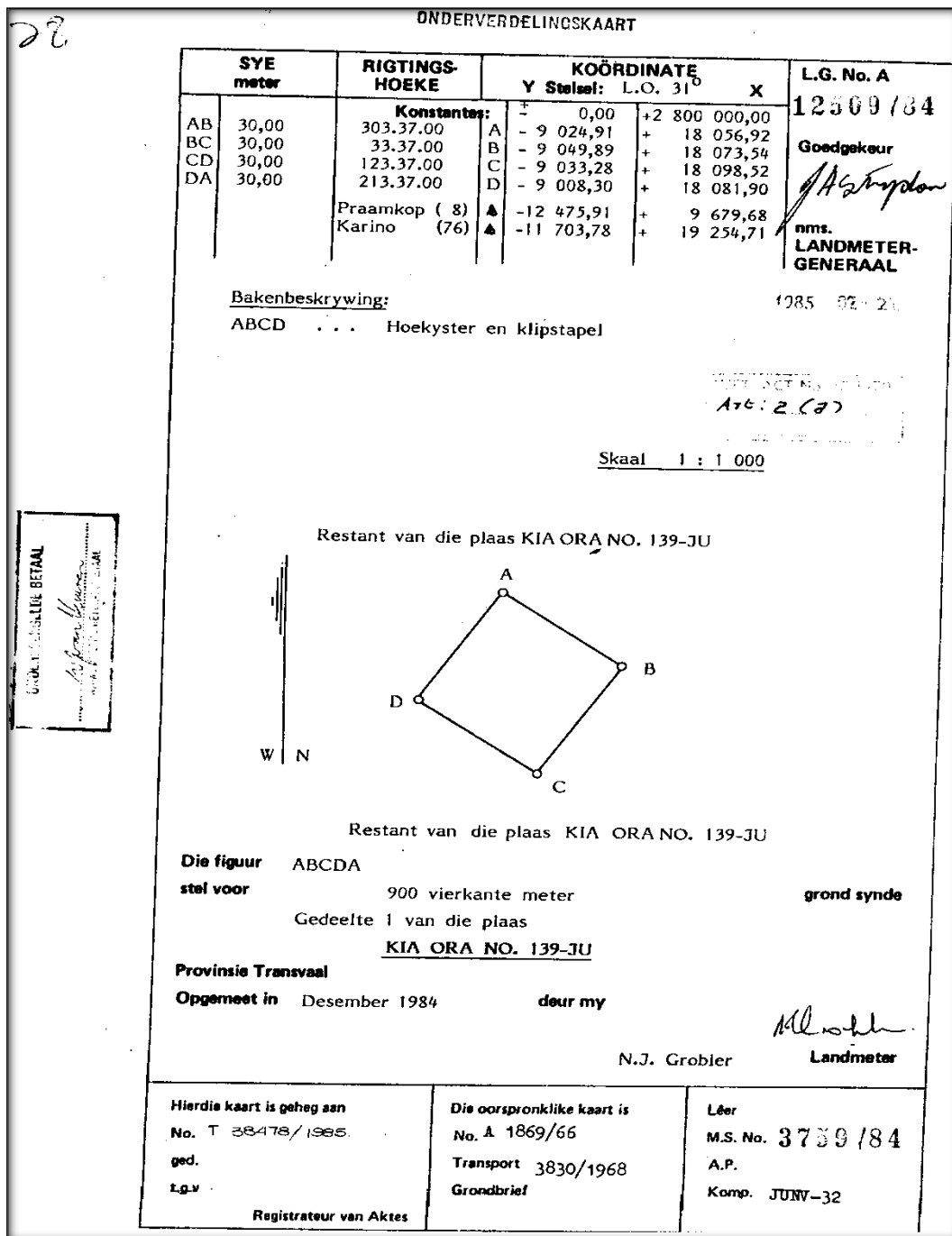


Fig.4: 1984 Map of Kia Ora 139JU ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)).

### Study Area Assessment

As background to this heritage assessment the following information was provided by Pear Environmental (Pty) Ltd on the Basic Assessment Process on the Proposed Amendment of the Existing Nelspruit Quarry Environmental Management Programme.

The landowner has requested that a portion of land within **the north eastern corner** of the existing MRA, approximately 14,500m<sup>2</sup> or 1,45 hectares in extent, be excluded from the current MRA in order **to allow for the expansion of the surrounding agricultural activities**



(Area 1 as indicated in Fig. 5 below). This area being proposed is **currently undisturbed by mining activities** and has no real value for Lafarge in terms of future mineral reserve. Within this area of proposed exclusion **there are also marked historic graves** which pose an ongoing management matter for Lafarge in terms of allowing community members continued access whilst also taking into account on going mining operations within the MRA. **The exclusion of the demarcated graves area from the MRA would additionally make it easier for the community to access the site in order to pay their respects.**

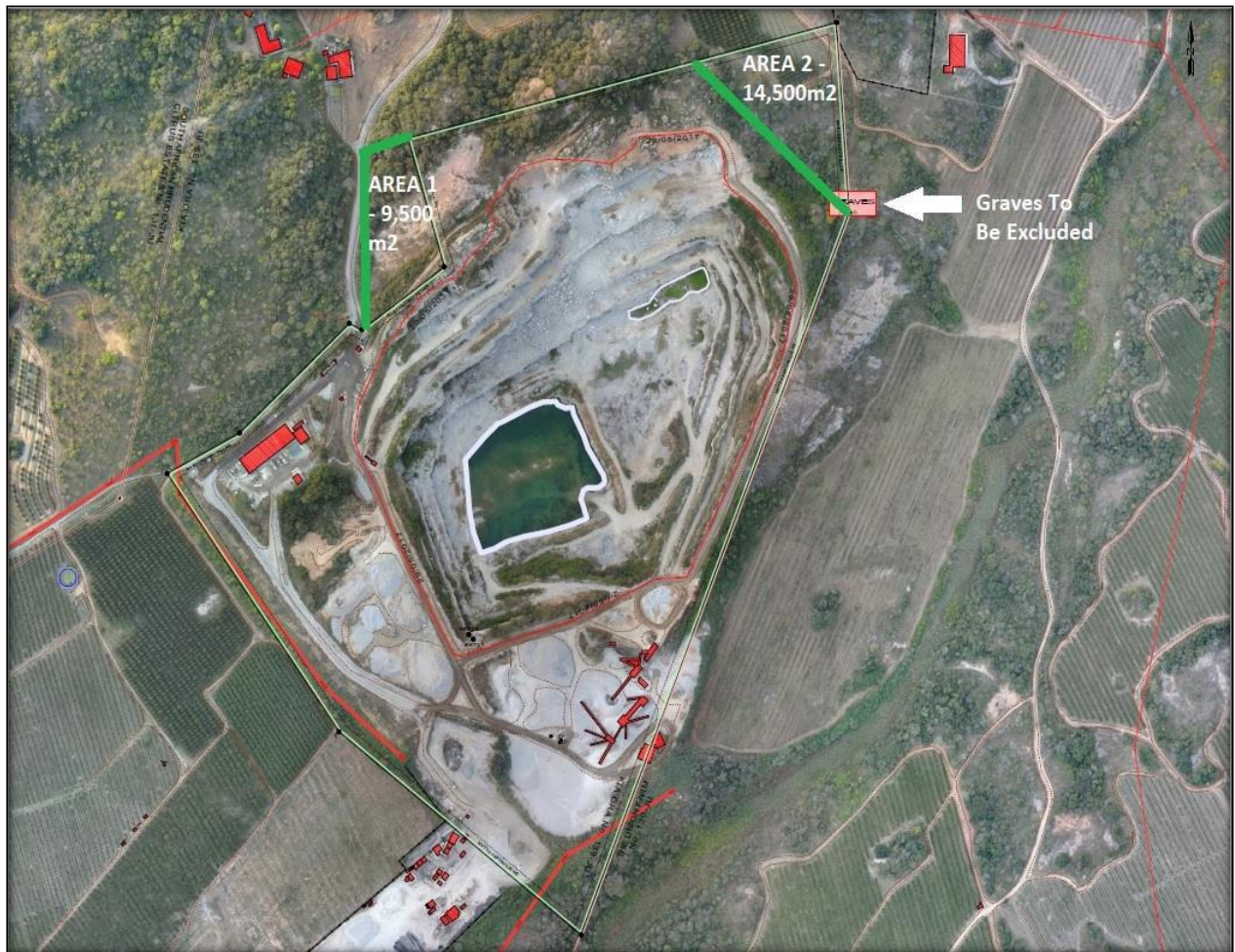
**In agreement for this area to be excluded the landowner has proposed to exchange a portion of land currently outside of the existing MRA to Lafarge, approximately 10,000m<sup>2</sup> or 1.00 hectares in extent, for future mine planning. This area is located on the north western corner of the existing MRA (Area 2 as indicated in Fig. 5 below) immediately adjacent to the security guard house, entrance road and bench 6 of the quarry pit.**

Based on the small extent of land being proposed for as part of the landowner exchange proposal, Lafarge, Pear Environmental (Pty) Ltd and the DMR agreed that a BA Process be followed instead of a full Scoping & Environmental Impact Reporting (S&EIR) Process as outlined by the Section 102 Regulation. The proposed project triggers certain listed activities which fall within the scheduled activities under the Environmental Impact Assessment (EIA) Regulations 2014; promulgated under the National Environmental Management Act, 1998 (Act No. 107 of 1998). In light of the activity identified, the application procedure to be followed is a BA process.

The advantages of the land swap are evident and include, amongst others:

1. Larger portion of land being removed than what is being added therefore the overall extent of the existing MRA is reduced;
2. The exclusion of the grave site from the new MRA therefore the community will have better and safer access to the site;
3. Increased opportunity for agricultural activities on the excluded area therefore increased employment opportunities for the surrounding community;
4. **Newly proposed area (Area 1) is surrounded by current mining activities whereas the area to be excluded is isolated (Area 2) and would involve a greater expansion of existing operations in order to mine the reserve. As a result of this, very limited environmental impact will occur from the addition of the new area and when considered as a cumulative impact, the land swap will in fact have a lesser effect than if the current portion were to be opened for mining as per the existing MRA;**
5. The newly proposed land portion (Area 1) is further away from community members and their daily work activities therefore making it safer to mine for surrounding landowners; and

6. There will be no increased production from the addition of the new area, instead an extension of the life of mine due to additional reserves and safer working conditions as a result of the reduced quarry high walls already surrounding Area 1.



**Fig.5: Aerial image & Plan of Quarry showing Area 1 (new area) and Area 2 (excluded area) and grave site that will be protected (courtesy Pear Environmental).**

Although a physical foot survey of the proposed Area 1 was not done as part of this assessment, it is clear that the area has been extensively disturbed in the recent past by quarrying and agricultural activities in the past. This is based on the aerial (Google Earth) images of the study area, as well as photographs provided by the client (see below).



**Fig.6: View of the quarry showing Area 1 & Area 2 (courtesy Anthony Bowen Lafarge).**



**Fig.7: Another view showing the location of Area 1 in yellow (courtesy Anthony Bowen Lafarge).**



**Fig.8: Another view indicating the location of the new Area 1 in yellow top of the picture (courtesy Anthony Bowen Lafarge).**

The extensive impact of the quarrying activities on the area is clearly evident from these pictures. If any cultural heritage (archaeological and/or historical) sites, features or material did exist here in the past it would have been extensively disturbed or destroyed as a result.

The only site of any cultural heritage significance in the area evidently is the grave site situated close to the Area 2 exclusion portion. The site and the graves on it will be protected by the “exclusion zone” and will therefore not be negatively impacted. Family and community members will be able to visit and tend to these graves without any issues.

Area B will be used for continuing agricultural activities by the local community. Area 1 (to be developed/quarried) is located close to the existing quarry and has already been fairly extensively disturbed. It is recommended that the proposed addendum to the existing quarry be allowed to continue, as there will be no negative impacts on any known or existing cultural heritage resources.

## **7. CONCLUSIONS AND RECOMMENDATIONS**

A Pelser Archaeological Consulting (APAC) was appointed by Lafarge Mining South Africa (Pty) Ltd to conduct a Basic HIA for the proposed Addendum to the Existing Nelspruit Quarry

on the Remaining Extent of the farm Kia Ora 139-JU in Nelspruit, City of Mbombela Local Municipality, Mpumalanga EMP (MP/30/5/1/2/2/117 MR).

The Draft Basic Assessment Report (drafted and submitted to Pear Environmental (Pty) Ltd) for this proposed addendum was submitted to SAHRA (Case ID#13181). SAHRA then requested in their Interim Comment Letter dated to 23 November 2018 that a Heritage Assessment be undertaken and a report submitted.

Background research indicates that there are a number of cultural heritage (archaeological & historical) sites and features in the larger geographical area within which the study area falls. As the study area (both the existing Quarry and new quarry area) has been extensively disturbed by quarrying operations it was believed that a physical assessment will not be required. Although a physical foot survey of the proposed Area 1 was not done as part of this assessment, it is clear that the area has been extensively disturbed in the recent past by quarrying and agricultural activities in the past. This is based on the aerial images of the study area, as well as photographs provided by the client.

The extensive impact of the quarrying activities on the area is clearly evident from these images. If any cultural heritage (archaeological and/or historical) sites, features or material did exist here in the past it would have been extensively disturbed or destroyed as a result. The only site of any cultural heritage significance in the area evidently is the grave site situated close to the Area 2 exclusion portion. The site and the graves on it will be protected by the "exclusion zone" and will therefore not be negatively impacted. Family and community members will be able to visit and tend to these graves without any issues.

Area 2 will be used for continuing agricultural activities by the local community. Area 1 (to be developed/quarried) is located close to the existing quarry and has already been fairly extensively disturbed.

**From a Cultural Heritage perspective it is therefore recommended that the proposed addendum to the existing quarry be allowed to continue, as there will be no negative impacts on any known or existing cultural heritage resources. Furthermore it is recommended that Lafarge Nelspruit Quarry be exempted from a full Heritage Impact Assessment based on this study.**

**It should be noted that although all efforts are made to locate, identify and record all possible cultural heritage sites and features (including archaeological remains) there is always a possibility that some might have been missed as a result of grass cover and other factors. The subterranean nature of these resources (including low stone-packed or unmarked graves) should also be taken into consideration. Should any previously unknown or invisible sites, features or material be uncovered during any development actions then an expert should be contacted to investigate and provide recommendations on the way forward.**

## 8. REFERENCES

General and closer views of study area location: Google Earth 2019.

Location Map & Aerial Plan of Quarry and Proposed Addendum Areas: Provided by Pear Environmental (Pty) Ltd.

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

Celliers, J. **Report on Phase 1 Archaeological Impact Assessment on Portions 2, 12 and 16 of the farm Perry's Farm 9 JU and Portion 12 and the remainder of Portion 109 of the farm De Rust 12 JU, Hazyview Mpumalanga Province**. Unpublished Report Kudzala Antiquity. For: Enpact Environmental Consultants. June 2012.

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

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

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

Pelser, A.J. 2011. **A Heritage Impact Assessment Study for the expansion of the Vuka Granite Mine on a portion of the farm Rochelle 606 JU, near Hazyview, Mpumalanga**. Unpublished Report Archaetnos cc AE1172. For: Vuka Crushers. July 2011.

Pelser, A.J. 2013. **A Report on a Phase I Heritage Assessment for the proposed Ronaldsey Secondary School Development on a Portion of the farm Ronaldsey 283KU, Bushbuck Ridge Local Municipality Area, Mpumalanga**. Unpublished Report APELSER ARCHAEOLOGICAL CONSULTING cc APAC013/36. For Imvelo Environmental Consultants.

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

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

Chief Surveyor General Database ([www.csg.dla.gov.za](http://www.csg.dla.gov.za)): Document 10F00Y01

## **APPENDIX A: DEFINITION OF TERMS:**

**Site:** A large place with extensive structures and related cultural objects. It can also be a large assemblage of cultural artifacts, found on a single location.

**Structure:** A permanent building found in isolation or which forms a site in conjunction with other structures.

**Feature:** A coincidental find of movable cultural objects.

**Object:** Artifact (cultural object).

(Also see Knudson 1978: 20).



## **APPENDIX B: DEFINITION/ STATEMENT OF HERITAGE SIGNIFICANCE**

**Historic value:** Important in the community or pattern of history or has an association with the life or work of a person, group or organization of importance in history.

**Aesthetic value:** Important in exhibiting particular aesthetic characteristics valued by a community or cultural group.

**Scientific value:** Potential to yield information that will contribute to an understanding of natural or cultural history or is important in demonstrating a high degree of creative or technical achievement of a particular period

**Social value:** Have a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

**Rarity:** Does it possess uncommon, rare or endangered aspects of natural or cultural heritage.

**Representivity:** Important in demonstrating the principal characteristics of a particular class of natural or cultural places or object or a range of landscapes or environments characteristic of its class or of human activities (including way of life, philosophy, custom, process, land-use, function, design or technique) in the environment of the nation, province region or locality.

## **APPENDIX C: SIGNIFICANCE AND FIELD RATING:**

### **Cultural significance:**

- Low: A cultural object being found out of context, not being part of a site or without any related feature/structure in its surroundings.
- Medium: Any site, structure or feature being regarded less important due to a number of factors, such as date and frequency. Also any important object found out of context.
- High: Any site, structure or feature regarded as important because of its age or uniqueness. Graves are always categorized as of a high importance. Also any important object found within a specific context.

### **Heritage significance:**

- Grade I: Heritage resources with exceptional qualities to the extent that they are of national significance
- Grade II: Heritage resources with qualities giving it provincial or regional importance although it may form part of the national estate
- Grade III: Other heritage resources of local importance and therefore worthy of conservation

### **Field ratings:**

- i. National Grade I significance: should be managed as part of the national estate
- ii. Provincial Grade II significance: should be managed as part of the provincial estate
- iii. Local Grade IIIA: should be included in the heritage register and not be mitigated (high significance)
- iv. Local Grade IIIB: should be included in the heritage register and may be mitigated (high/medium significance)
- v. General protection A (IV A): site should be mitigated before destruction (high/medium significance)
- vi. General protection B (IV B): site should be recorded before destruction (medium significance)
- vii. General protection C (IV C): phase 1 is seen as sufficient recording and it may be demolished (low significance)

## **APPENDIX D: PROTECTION OF HERITAGE RESOURCES:**

### **Formal protection:**

National heritage sites and Provincial heritage sites – Grade I and II

Protected areas - An area surrounding a heritage site

Provisional protection – For a maximum period of two years

Heritage registers – Listing Grades II and III

Heritage areas – Areas with more than one heritage site included

Heritage objects – e.g. Archaeological, palaeontological, meteorites, geological specimens, visual art, military, numismatic, books, etc.

### **General protection:**

Objects protected by the laws of foreign states

Structures – Older than 60 years

Archaeology, palaeontology and meteorites

Burial grounds and graves

Public monuments and memorials

## **APPENDIX E: HERITAGE IMPACT ASSESSMENT PHASES**

1. Pre-assessment or Scoping Phase – Establishment of the scope of the project and terms of reference.
2. Baseline Assessment – Establishment of a broad framework of the potential heritage of an area.
3. Phase I Impact Assessment – Identifying sites, assess their significance, make comments on the impact of the development and makes recommendations for mitigation or conservation.
4. Letter of recommendation for exemption – If there is no likelihood that any sites will be impacted.
5. Phase II Mitigation or Rescue – Planning for the protection of significant sites or sampling through excavation or collection (after receiving a permit) of sites that may be lost.
6. Phase III Management Plan – For rare cases where sites are so important that development cannot be allowed.