

# PHASE 1 HERITAGE IMPACT ASSESSMENT

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## DER BROCHEN PROJECT RICHMOND COMPLEX: TRIAL MINING PHASE MPUMALANGA PROVINCE

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## CONTENTS

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2	Executive summary
3	1 Introduction
	2 Method
	2.1 Sources of information
4	2.2 Limitations
	2.3 Categories of significance
	2.4 Terminology
5	3 Relevant legislation
	3.1 National Heritage Resources Act
	3.2 Human tissues Act
	4 Description of the proposed development and terrain
6	5 Archaeological and Historical Remains
	5.1 Stone Age Remains
	5.2 Iron Age Remains
	5.3 Recent Historical Remains and Graves
7	6 Evaluation
8	7 Recommendations
9	8 Extracts from the National Heritage Resources Act (Act No. 25 of 1999)
	9 Bibliography
10	MAP

## **EXECUTIVE SUMMARY**

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Anglo Platinum plans to develop a trial mining phase on the farm Richmond 370 KT. A heritage resources survey of this area has detected a significant archaeological site as well as a number of sites with recent historical remains. The determination of significance is based on criteria explained in the methodology section of the report.

The development has already had an adverse effect on the detected archaeological site, which constitutes the contravention of Sections 35 and 38 of the National Heritage Resources Act, 1999. Mitigation with the relevant heritage resources authority to resolve the situation is recommended before further work is undertaken.

Some of the recent historical sites may be sensitive for burials and it is recommended that sites 8 and 11 are investigated to determine whether or not the stone features present are graves.

Apart from the archaeological site, and provided that the possible burial sites are investigated, the terrain where trail mining is to be conducted seems clear of any other significant heritage resources. From a heritage resources management point of view, there is no objection with regard to the development on condition that the recommendations are implemented. This should result in no further significant impacts on the heritage resources through all the developmental phases.

## 1. INTRODUCTION

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The **Project Proposal** constitutes an activity for which an Environmental Management Programme is required - provided for by paragraph 2.13 of the AIDE – Memoir as a requirement of the Minerals Act, 1991. In addition, the National Heritage Resources Act (Act No. 25 of 1999), protects all archaeological, palaeontological and historical sites and graves, and requires heritage resources impact assessments in terms of Section 38. To satisfy the requirements of the above legislation, a Phase 1 Heritage Impact Assessment (scoping & evaluation) of the proposed mining area was undertaken. In order to comply with legislation, Anglo Platinum requires information on the heritage resources, and their significance that occur in the proposed mining area. This will enable the Der Brochen mine to take pro-active measures to limit the adverse effects that the development could have on such heritage resources.

The author was contracted by SRK Consulting to undertake a Phase 1 *Heritage Impact Assessment* of the demarcated surface area on the farm Richmond 370 KT (Refer to map, South Africa 1:50 000 2430 AC), where the Trial Mining shaft area and related infrastructure are to be constructed. The aim was to determine the presence of heritage resources such as archaeological and historical sites and features, graves and places of religious and cultural significance; to assess the impact of the proposed project on such heritage resources, and to submit appropriate recommendations with regard to the cultural resources management measures that may be required at affected sites / features.

The report thus provides an overview of the heritage resources and graves that were detected in the area of development. The significance of the heritage resources was assessed in terms of criteria defined in the methodology section. The impact of the proposed development on these resources is indicated and the report recommends mitigation measures that should be implemented to minimise the adverse effect of the proposed mining activities on these heritage resources and graves. Mitigation measures also apply to heritage resources not detected during the survey, but which may be uncovered during excavations, construction of infrastructure and roads, and general mining activities.

## 2. METHOD

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### 2.1 Sources of information

The source of information was primarily the field reconnaissance and the phase 1 report prepared by *Archaeological Resources Management*, University of the Witwatersrand, February 2002.

A thorough survey of the proposed activity areas was undertaken on foot. Standard archaeological practices for observation were followed. As most archaeological material occur in single or multiple stratified layers beneath the soil surface, special attention was given to disturbances, both man-made such as roads and clearings, as well as those made by natural agents such as burrowing animals and erosion. Locations of archaeological material were recorded by means of a GPS (Garmin 12). Archaeological material and the general conditions on the terrain were photographed with a Hewlett-Packard 120 Digital camera.

## 2.2 Limitations

The foot survey was very thorough and it is unlikely that any significant heritage resources were missed. However, the discovery of previously undetected heritage remains must be reported and may require further mitigation measures.

## 2.3 Categories of significance

The significance of archaeological sites is ranked into the following categories.

• No significance: sites that do not require mitigation.
• Low significance: sites, which <i>may</i> require mitigation.
• Medium significance: sites, which require mitigation.
• High significance: sites, which must not be disturbed at all.

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 crucial aspect in determining the significance and protection status of a heritage resource is often whether or not 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 mitigated in order to gain data / information which would otherwise be lost. Such sites must be adequately recorded and sampled before being destroyed. These are generally sites graded as of low or medium significance.*

## 2.4 Terminology

Early Stone Age:	Predominantly the acheulean hand axe industry complex dating to + 1Myr yrs – 250 000 yrs. before present.
Middle Stone Age:	Various lithic industries in SA dating from ± 250 000 yr. - 30 000 yrs. before present.
Late Stone Age:	The period from ± 30 000-yr. to contact period with either Iron Age farmers or European colonists.
Early Iron Age:	Most of the first millennium AD
Middle Iron Age:	10 <sup>th</sup> to 13 <sup>th</sup> centuries AD
Late Iron Age:	14 <sup>th</sup> century to colonial period. <i>The entire Iron Age represents the spread of Bantu speaking peoples.</i>
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.

### **3. RELEVANT LEGISLATION**

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Two sets of legislation are relevant for this study with regard to protection of heritage resources and graves.

#### **3.1 The National Heritage Resources Act (25 of 1999) (NHRA)**

This Act established the South African Heritage Resources Agency (SAHRA) and makes provision for the establishment of Provincial Heritage Resources Authorities (PHRA). The Act makes provision for the undertaking of heritage resources impact assessments for various categories of development as determined by Section 38. It also provides for the grading of heritage resources and the implementation of a three tier level of responsibilities and functions for heritage resources to be undertaken by the State, Provincial authorities and Local authorities, depending on the grade of the Heritage resources. The Act defines cultural significance, archaeological and palaeontological sites and material (Section 35), historical sites and structures (Section 34), graves and burial sites (Section 36) which falls under its jurisdiction. Archaeological sites and material are generally those resources older than a hundred years, while structures and cultural landscapes older than 60 years, including gravestones, are also protected by Section 34. Procedures for managing grave and burial grounds are clearly set out in Section 36 of the NHRA. Graves older than a 100 years are legislated as archaeological sites and must be dealt with accordingly

Section 38 of the NHRA makes provision for *developers to apply for a permit before any heritage resource may be damaged or destroyed.*

#### **3.2 The Human Tissues Act (65 of 1983)**

This Act 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.

### **4. DESCRIPTION OF THE PROPOSED DEVELOPMENT AND TERRAIN**

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The Trail Mining complex will consist of the Contractor's Laydown Area, Settling Dam, Waste Rock Dump, Footwall Declines, Gathering Haulages, Mini Substation, roads and water provision facilities. The southern part of the terrain consists of an elongated hill where the water storage tanks and the mini substation are to be located, while the rest of the complex will be located in the valley, which is an eroded drainage area. Most of the valley area had been ploughed in the recent past.

## 5. ARCHAEOLOGICAL AND HISTORICAL REMAINS

### 5.1 STONE AGE REMAINS

A few Middle Stone Age flakes are to be seen in the eroded areas, but no concentration of any significance was noted.

Significance: None.

### 5.2. IRON AGE REMAINS

#### **SITE 1** (1.1 – 1.7 on map)

The entire hilltop including its northwestern slopes on the southern part of the Trial Mining area is covered by a Late Iron Age *Moloko* (early Pedi) settlement. This is a pre-colonial settlement and could date anywhere between the 17<sup>th</sup> century and the early 19<sup>th</sup> century. It consists of the typical Sotho stone walled settlement pattern. A stone cairn of unknown function was recorded at coordinates  $S24^{\circ}59'22.6'' E30^{\circ}05'26.2''$  (1.4 on map). The archaeological site is generally well preserved, except for the northwestern slope where modern activities have caused damage. Stones from the walls have also been robbed for use elsewhere.

A modern grave was noted at coordinates  $S24^{\circ}59'20.9'' E30^{\circ}05'27.1''$  (1.5 on map), although no signs of recent settlement was seen here. A communal grinding stone was noted at coordinates  $S24^{\circ}59'20.6'' E30^{\circ}05'21.8''$  (site 1.7 on map)

Middle Iron Age *Eiland* (10<sup>th</sup> – 13<sup>th</sup> century AD) pottery fragments were also found on the hill. This could be an indication that the site had multiple occupations during the past thousand years, or alternatively, the site had been used for spiritual (rain making) purposes by the *Eiland* people.

A new mining access road to the hill and the leveling of an area, presumably for the trial mining water storage tanks, has recently damaged this archaeological site. According to the map provided by SRK, this infrastructure development is indicated at a location above the 1100 meter contour line. *It is thus a modification of the planned development from the developer's side without notifying SRK.*

Significance: **High**. The grading of the site is required in terms of the NHRA. Work must cease at this site until

### 5.3 RECENT HISTORICAL REMAINS

<b>SITE: 2</b>	$S24^{\circ}59'12.9'' E30^{\circ}05'25.8''$	Pottery fragments and remnants of stone foundations. An occupied homestead occurs between sites 2 and 3 <b>where a grave was noted</b> .
<b>3</b>	$S24^{\circ}59'10.3'' E30^{\circ}05'25.2''$	Remnants of stone foundation.
<b>4</b>	$S24^{\circ}59'06.6'' E30^{\circ}05'27.2''$	Pottery fragments, grinding stones and remnants of stone foundations.
<b>5</b>	$S24^{\circ}59'04.5'' E30^{\circ}05'28.1''$	Pottery fragments.

6	S24° 59' 05.7" E30° 05' 31.5"	Pottery fragments and remnants of stone foundations.
7	S24° 59' 08.7" E30° 05' 33.1"	Pottery fragments and remnants of stone foundations.
8	S24° 59' 12.6" E30° 05' 53.5"	Pottery fragments, grinding stones and remnants of stone foundations. A stone cairn indicating a possible grave exists here.
9	S24° 59' 11.1" E30° 05' 39.4"	Pottery fragments.
10	S24° 59' 14.5" E30° 05' 41.6"	Ruin of a clay structure, pottery fragments and grinding stones.
11	S24° 59' 16.5" E30° 05' 47.6"	Pottery fragments, grinding stones and remnants of stone foundations. Two stone cairns were noted here which may be graves.

It must be noted that any of these recent historical sites may contain unmarked burials, especially those of infants, who were traditionally buried inside a hut or outside under the drip line of the roof.

**Significance: Low. Sites 8 and 11 are sensitive and must be investigated to confirm the presence of graves.**

## 6. EVALUATION

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The archaeological site (site 1) is a significant heritage resource and is provisionally graded as a **Grade II** heritage resource in term of Section 38 of the NHRA, pending confirmation from SAHRA or the Provincial Heritage Resources Authority (PHRA) in Mpumalanga. This implies that its cultural resource management now becomes the responsibility of the PHRA and that it must be listed in the Provincial heritage register. *Any further actions involving this site must be mitigated directly with the relevant authorities in Mpumalanga.*

The recorded sites with recent historical remains are probably homestead sites of farm workers. The surface areas at sites 2, 8, 10 and 11 are relatively undisturbed with the result that the historical debris may overlie archaeological deposits. These areas may thus be sensitive and any undetected cultural material exposed here during operations must be reported to the relevant heritage resources authority or an archaeologist. As mentioned above at 5.3 these areas may also be sensitive for burials, especially sites 8 and 11.



## 8. RECOMMENDATIONS

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In view of the above it is recommended:

1. That no further construction work be undertaken at **Site 1** pending confirmation of the status of the archaeological site after which mitigation must be negotiated with the relevant heritage resources authority.
2. That the stone **cairns at sites 8 and 11** be investigated to confirm the presence of graves before development commences here.

*Should the above-mentioned recommendations and resulting mitigation measures be implemented, the impacts of the development on the heritage resources during all phases, i.e. construction, operational, decommissioning and residual impacts after closure, will be appropriately managed.*

8. **Extracts from:  
The National Heritage Resources Act (Act No. 25 of 1999).**

**Archaeology, palaeontology and meteorites**

Subsection 35. (3) Any person who discovers archaeological or palaeontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resources authority, or to the nearest local authority or museum, which must immediately notify such heritage resources authority.

Subsection 35. (4) 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.

**Burial grounds and graves**

Subsection 36. (6) Subject to the provision of any law, any person who in the course of development or any other activity discovers the location of a grave, the existence of which was previously unknown, must immediately cease such activity and report the discovery to the responsible heritage resources authority which must, in co-operation with the South African Police Service and in accordance with regulations of the responsible heritage resources authority-

- (a) carry out an investigation for the purpose of obtaining information on whether or not such grave is protected in terms of this Act or is of significance to any community; and
- (b) if such grave is protected or is of significance, assist any person who or community which is a direct descendant to make arrangements for the exhumation and re-interment of the content of such grave or, in the absence of such person or community, make any such arrangement as it deems fit.

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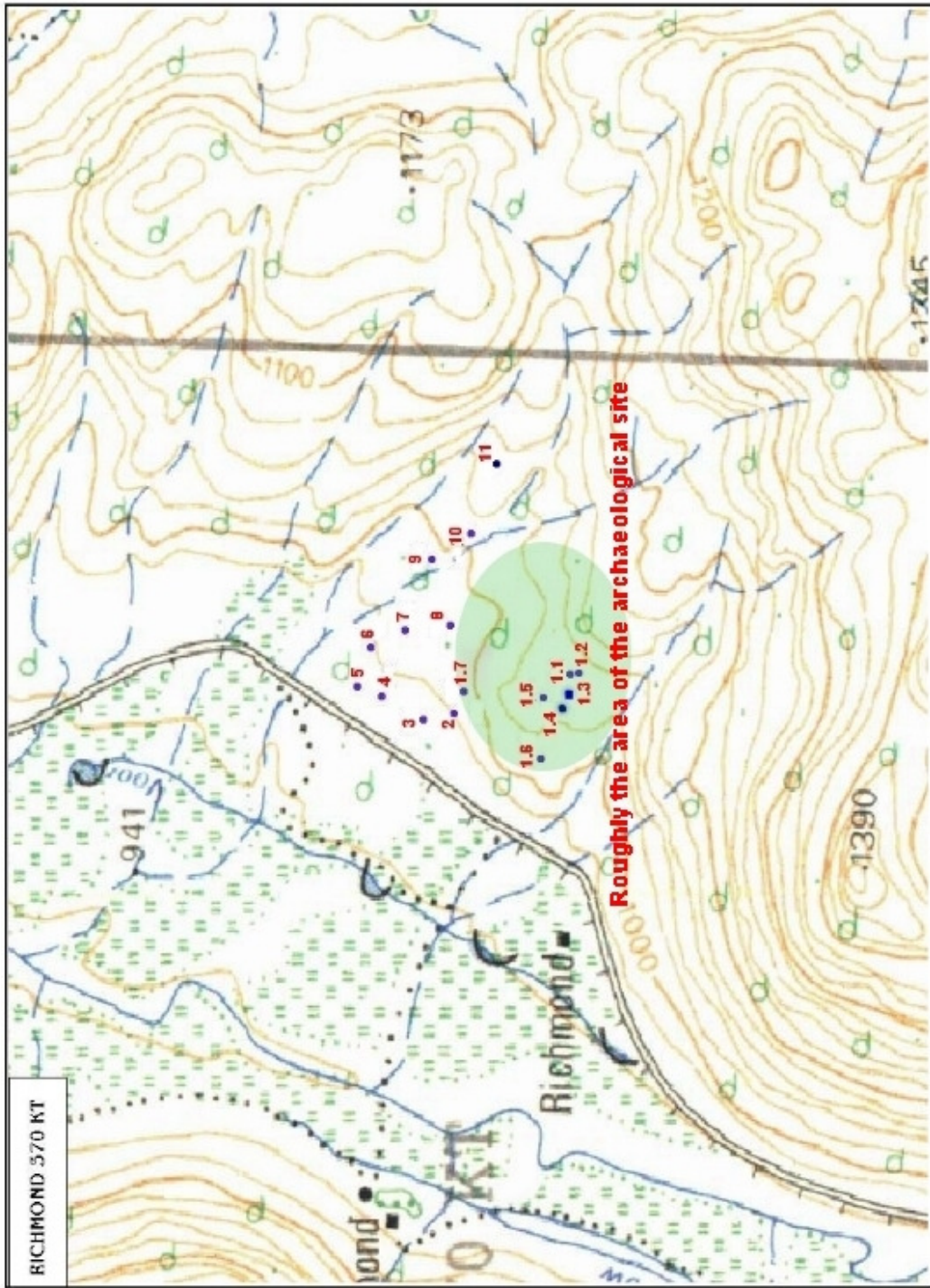
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A handwritten signature in black ink, appearing to read 'Frans Roodt', written in a cursive style.

**FRANS ROODT** (*BA Hons, MA Archaeology, Post Grad Dip in Museology; UP*)

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Principal Investigator for R & R Cultural Resource Consultants



MAP showing sites mentioned in the report