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Rasimone Platinum EMPR Amendment

TO:
METAGO ENVIRONMENTAL ENGINEERS
BAFOKENG RASIMONE PLATINUM MINE

**AN ARCHAEOLOGICAL IMPACT ASSESSMENTS STUDY
FOR RASIMONE PLATINUM MINE ON THE FARMS
BOSCHKOPPIE 104 JQ AND STYLDRIFT 90 JQ IN THE
NORTH-WEST PROVINCE OF SOUTH AFRICA:
AMENDMENT TO THE CURRENT ENVIRONMENTAL
MANAGEMENT PROGRAMME**

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CONTENTS

EXECUTIVE SUMMARY	2
1 INTRODUCTION	5
2 ARCHAEOLOGICAL REMAINS AND LEGISLATION	7
2.1 The Environment Conservation Act (Act No 73 of 1989)	7
2.2 The Minerals Act (Act No 50 of 1991)	7
2.3 The National Heritage Resources Act (Act No 25 of 1999)	7
2.4 Legislation relevant to graves, the exhumation and relocation of human remains	8
2.4.1 Graves younger than 60 years	8
2.4.2 Graves older than 60 years	9
2.4.3 Graves older than 100 years	9
2.4.4 Graves of victims of conflict	10
3 AIM OF THIS REPORT	11
4 METHODOLOGY	13
4.1 Sources of information	13
4.2 Predictive evidence	13
4.3 The survey on foot	14
4.4 Some remarks on terminology	14
5 CONTEXTUALISING THE BAFOKENG RASIMONE PLATINUM MINE STUDY AREA	16

1 INTRODUCTION

This document contains the report on the results of an archaeological impact assessment study done for the Bafokeng Rasimone Platinum Mine on parts of the farms Boschkoppie 103 JQ and Styldrift 90 JQ in the Rustenburg district of the Central Bankenveld of South Africa.

The Bankenveld is located, ecologically speaking, between the Bushveld (to the north) and the Highveld (to the south). For the purposes of this report, this ecozone is divided into the Western Bankenveld, the Central Bankenveld and the Eastern Bankenveld. The Western Bankenveld is the area around Zeerust, Marico and Swartruggens in the far North-West. The Central Bankenveld includes the areas around Rustenburg, Marikana and Brits. The Eastern Bankenveld is the area to the east of Pretoria and includes the Middelburg district as far as Belfast and Roossenekal.

The Western Bankenveld is largely unexplored in terms of its archaeology, compared to the Eastern Bankenveld. However, it is known that in the Western Bankenveld, like in the Eastern Bankenveld, there were numerous Batswana chiefdoms. The remains of stone walled villages left by these chiefdoms can therefore still be found in this part of the Bankenveld. These chiefdoms emerged five hundred years ago and were destroyed during the *difaqane* in the early 19th century. Stone walled settlements in the Eastern Bankenveld also date from the last five hundred years and are largely associated with the Manala-Ndebele and with the Ndzundza-Ndebele.

The Bankenveld as a whole has a rich archaeological heritage comprised of remains dating from the prehistoric and the historical (or colonial) periods of South Africa. Prehistoric and historical remains in the Bankenveld form a record of the cultural heritage of most groups living in South Africa today. These remains include:

- limestone caves and underground dwelling sites of the earliest hominids (ape-man creatures) who lived near Krugersdorp in South Africa 2 to 3 million years ago;
- Stone Age sites that may be associated with the San people and which date back hundreds of thousands of years;
- rock engraving sites located near diabase outcrops and dating from the last 20 000 years;

2 ARCHAEOLOGICAL REMAINS AND LEGISLATION

The Bafokeng Rasimone Platinum Mine's study area on the farms Boschkoppie and Styldrift is situated in the archaeologically sensitive Central Bankeveld. All settlements older than hundred years and all structures or parts of structures older than sixty years located in this region are protected by legislation. A synopsis of the relevant legislation is provided below. It must serve as a guideline to be considered before any development project is undertaken.

2.1 The Environment Conservation Act (Act No 73 of 1989)

The Environment Conservation Act (Act No 73 of 1989) makes provision for the drawing up of reports concerning the impact on the environment of activities identified and prohibited in terms of Sections 21 and 22 respectively. These reports must evaluate the impact that development may have on the natural and man-made environment, and this includes archaeological sites.

Local and regional authorities (Town Councils, Regional Governments and Regional Services Councils) also have regulations requiring evaluation of the possible effects that rezoning and development schemes may have on the environment, including the cultural environment. These regulations must be studied to ensure that they are implemented correctly.

2.2 The Minerals Act (Act No 50 of 1991)

The Minerals Act (Act No 50 of 1991) and the Minerals Amendment Act (Act No 103 of 1993) require plans for the conservation of the environment at or in the vicinity of any mine or works to be detailed in an environmental management programme (EMP). The EMP must indicate how the natural and the 'man-made' environment will be protected and rehabilitated during and after the mining.

2.3 The National Heritage Resources Act (Act No 25 of 1999)

The National Heritage Resources Act (Act No 25 of 1999) requires all developers (including engineers, farmers [agriculturists] and mines, previously excluded from the bill) to undertake impact assessment studies whenever any development activities are undertaken. The law also provides guidelines for impact assessment studies to be done whenever cultural resources may be destroyed by development activities. Permits must be acquired from the South African Heritage Resources Agency (SAHRA) before a heritage site can be affected or destroyed during the course of development activities.

2.4.2 Graves older than 60 years

Graves older than 60 years but younger than 100 years fall under Section 36 of Act 25 of 1999 (the National Heritage Resources Act) as well as the Human Tissues Act (Act 65 of 1983) and under the jurisdiction of the South African Heritage Resources Agency (SAHRA). The Procedure for Consultation Regarding Burial Grounds and Graves (Section 36[5] of Act 25 of 1999, National Heritage Resources Act) is applicable to graves older than 60 years which are situated outside a formal cemetery administered by a local authority. Graves in this category located inside a formal cemetery administered by a local authority also require the same authorisation as set out for graves younger than 60 years, over and above SAHRA authorisation. If the grave is not situated inside a formal cemetery but is to be relocated to one, permission from the local authority is required and all regulations, laws and by-laws set by the cemetery authorities must be adhered to. In order to handle and to transport human remains, the institution conducting the relocation needs authorisation under Section 24 of Act 65 of 1983 (the Human Tissues Act). Any alteration to a grave in this category or the relocation thereof must be supervised by an archaeologist accredited by SAHRA and the Cultural Resource Management Section of the South African Association for Archaeologists.

2.4.3 Graves older than 100 years

All graves older than 100 years are legislated as being archaeological and therefore protected under Act 25 of 1999 (the National Heritage Resources Act). SAHRA authorisation is required for all graves in this category, regardless of where they are located. Any alteration to a grave in this category or the relocation thereof must be supervised by an archaeologist accredited by SAHRA and the Cultural Resources Management Section of the South African Association of Archaeologists. If the grave is situated in a cemetery administered by a local authority, the authorisation as set out for graves younger than 60 years are also applicable, over and above SAHRA authorisation. At the discretion of SAHRA, the Procedure for Consulting Regarding Burial Grounds and Graves (Section 36[5] of the National Heritage Resources Act) might also be required. In order to handle and transport human remains, the institution conducting the relocation must have authorisation under Section 24 of Act 65 of 1983 (the Human Tissues Act).

3 AIM OF THIS REPORT

Anglo Platinum and the Royal Bafokeng Nation ('RBN') propose to embark on a joint venture to mine the platinum group metals ('PGM') reefs on the farm Styldrift, adjacent to the current Anglo Platinum Bafokeng Rasimone Platinum Mine (BRPM) in the Bafokeng district of the North-West Province. The development will take the form of an extension to the current BRPM mine and will include a new decline shaft, an extension to the concentration plant and an extension to the current tailings dam. An EMPR amendment is required for the planned extensions to the current mining operations. Metago Environmental Engineers ('Metago'), an independent firm of environmental consultants, has been appointed to undertake the compilation of the EMPR amendment (Metago Environmental Engineers, Background Document).

In order to comply with legislation, the BRPM requires knowledge of the presence, relevance and the significance of any cultural resources that may occur in three critical areas on the farms Boschkoppe 103 JQ and Styldrift 90 JQ, where new mining infrastructure will be developed. The critical areas where the development will take place are referred to as the Styldrift Shaft Area, the Ventilation and Refrigeration Area and the Tailings Dam Area. BRPM needs this information in order to take pro-active measures with regard to any cultural resources that may occur in these areas and that will be affected by the new developments, as such remains may be affected, damaged or destroyed by the proposed development activities. The BRPM and Metago Environmental Engineers therefore commissioned me to undertake an archaeological impact assessment study of the critical areas to be affected by the extension of the present BRPM. The aim of the archaeological impact assessment study is:

- to establish whether any cultural resources do occur in the critical areas where the proposed developments will take place and, if so, what the nature, the extent and the significance of these remains are;
- to determine whether such remains will be affected by the proposed development activities; and
- to evaluate what appropriate actions could be taken to reduce the impact of the development activities on such remains.

This report therefore provides an overview of the types (or range) of cultural resources that were/were not observed in the three critical areas to be affected by the development activities. This report also provides a projection of the types

4 METHODOLOGY

4.1 Sources of information

To establish the possible presence of cultural resources, a literature survey was done, databases on cultural resources were consulted, information was collected from colleagues, and surveillance aids such as maps were consulted. The survey of literature pertaining to the broad history, ethnography and archaeology of the study area was also done in order to contextualise the study area with regard to the presence of humans, cultures and important events in time and space. This provided, albeit only as a broad framework, a sense of human interaction with the environment in the study area from the earliest times. This historical (chronological) overview of the study area was linked to the possible ranges of cultural resources one would expect to find in the study area (see 'Contextualising the study area' and 'Bibliography pertaining to the study area').

Information derived from databases kept and maintained at institutions such as the South African Heritage Resources Agency (SAHRA) and the National Cultural History Museum in Pretoria were used to determine whether any cultural resources have been identified during field surveys or post-graduate studies in the study area. This author alone completed at least three field surveys in the immediate surroundings of the study area (see 'Bibliography pertaining to the study area').

4.2 Predictive evidence

The possible presence of cultural resources in the study area can be predicted on the basis of the archaeologist's experience, gained through years of fieldwork, particularly in the Central Bankveld. The possible presence of cultural resources was also determined from information provided/not provided by modern aids such as the 1:50 000 topographical maps of Boschkoppie 103 JQ and Styldrift 90 JQ (Sun City 2527AC) and from an aerial survey of the study area done R. J. Mason in 1986. Reville Mason studied aerial photographs of the area in order to establish the presence of stone walled sites in this part of the former Transvaal province. The survey revealed that stone walled sites occur in clusters or large concentrations further to the west of Pretoria. A survey of the Plianesberg (in progress) also confirmed the presence of large numbers of sites in this mountain range.

The Late Iron Age refers to the time period between the 17th century and the 19th century and can therefore include the historical period.

The critical area(s) refers to the area where BRPM will focus mining and development activities.

The peripheral or non-critical area refers to the area where BRPM will not focus mining and development activities in the immediate future.

The non-disturbed or affected area refers to the area outside the mining area which will not be affected by mining activities in the future.

The **Late Stone Age** commenced twenty thousand years ago or somewhat earlier. The various types of stone age industries scattered across the country are associated with the historical San and Khoi-Khoi people. The San were renowned as formidable hunter-gatherers, while the Khoi-Khoi herded cattle and small stock during the last two thousand years. Late Stone Age people manufactured tools that were small but highly effective, such as arrow heads and knives.

The Late Iron Age people were also known for their **rock art skills**. Rock paintings do occur in the Plianesberg but are limited in number. Some rock engravings have been found to the west of the Magaliesberg near Rustenburg and at Maanhaarrand to the south-east of Rustenburg. Late Stone Age people occupied cave sites in the Magaliesberg and possibly also in the Plianesberg, to the north of the study area.

Early Iron Age farming communities practised a mixed economy, consisting of plant cultivation and stock herding, in the interior of South Africa during the first half of the first millennium A. D.. These Bantu-Negroid people, who probably interbred with the local San and Khoi-Khoi, were ironworkers of some repute and established the first permanent villages south of the Limpopo River. Some of their settlements occur to the south and to the north of the Magaliesberg.

During the **Late Iron Age**, farming was practised in the northern, central and eastern parts of the country. Stone walled settlements built from the 17th century onwards are numerous in the Central Bankeveld, where they are associated with the Tswana. Small vanguards of these agro-pastoralists may, however, have been present in this area as early as the 14th century. One of the earliest ancestors was known as Mogale, from whose name the Magaliesberg derives its name. The settlements of these early Batswana chiefdoms are characterised by an impressive and elaborate stone-built tradition. Hundreds of sites were built along the bases of granite hills between Pretoria and Rustenburg. Several of these stone walled sites also occur to the west of the BRPM study area on the farm Elandsfontein 102 JQ.

The BRPM clearly falls between the spheres of influence of the Bathako (who occupied the Matlapynsberg) and the Bakgatla Bagakgafêla (who lived in and near the Plianesberg, north of Boschkopie and Styldrift). The Batokeng occupied the strip of land between the Magaliesberg and the Thaba ea Nape mountain range that separates Marikana from Rustenburg. Historically speaking, the study area therefore falls between these spheres of influence and theoretically should not harbour any extensive Late Iron Age remains that can be associated with these Batswana groups.

family occupied the farm during the second half of the 19th century. The farm was declared a national heritage site in 1936 and has been preserved by the Simon van der Stel Foundation since 1971.

Other towns and villages close to the study area which were, for a time, part of the Bophuthatswana homeland, are the towns of Phôkeng, Thlabane, Rasimone, Bala and Chaneng. The latter three towns are located on the eastern border of the BRPM. The town of Phôkeng came into being when the Bafokeng established themselves, according to oral tradition, at a place called 'Phôka' during the early decades of the 17th century. ('Phôka' is a type of wild grass the people ate during a time of famine). Later Bafokeng rulers reigned between the Magaliesberg in the west and the Thaba ea Maralla range of mountains to the east.

The town of Boschhoek's name is derived from that of the farm Boschhoek. The town is located along the railway line from Pretoria and was formerly a terminus. The town is known for its citrus and for the cultivation of Virginia tobacco. Several old houses and shops still stand along the town's main street. Farmers and workers have occupied the Boschhoek area without interruption since the 19th century. Remains dating from this historical (colonial and modern) period therefore exist in or near the study area. The character of the town has, however, gradually changed, due to the expansion of platinum and chrome mining and the constant stream of visitors and tourists that passes through the town on their way to Sun City and the Pilianesberg Game Reserve.