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Department of Arts and Culture

FOR APPROVAL

COMMITTEE MEETING DATES:

GDRC: 23/03/2022

EXCO: TBC

HRM COM: TBC

COUNCIL: TBC

SUBMITTED BY: Archaeology, Palaeontology and Meteorites Unit

DATE: 14/03/2022

FILE REF/SAHRIS SITE ID: 9/2/005/0002

SAHRIS SITE CATEGORY:

SAHRIS CASE ID: 12324

FOR DISCUSSION

ENQUIRIES: Natasha Higgitt and Phillip Hine

Item:

Title: Site assessment of Black Rock Koppie Mine, Santoy, Northern Cape Province

1. BACKGROUND

1.1 GDRC decision

At a meeting of the Grading and Declaration Review Committee (GDRC) on 21 October 2021, the GDRC decided that the Archaeology, Palaeontology and Meteorites (APM) and Built Environment (BEU) Units must conduct a site assessment of the Black Rock Koppie Mine (BRKM) to gather further information so the GDRC could decide whether to provisionally protect the mine. The background to the submission to the GDRC is attached as Appendix A.

1.2 The Black Rock Mine is located near Santoy and Hotazel, in the Northern Cape Province as shown in Figure 1 and Figure 2 below. The Black Rock Mine has been in operation since the 1940s and employed both open cast and underground mining techniques. The stratabound ore deposits of the Kalahari Manganese field represent the largest land bound sedimentary manganese deposits in the world and originated from a single episode of manganese deposition about 2200 million years ago (Küsel et al, 2009) (SAHRIS Case ID 807).



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Figure 1: Location of Black Rock Mine in Northern Cape Province



Figure 2: Location of Black Rock Mine



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2. SITE ASSESSMENT

2.1 The site assessment by the APM Unit and Built Environment Unit (BEU) was conducted on 25 January 2022. Please see attached attendance register (Appendix B) for site assessment (Please note that Mr. Abdul Ebrahim was in attendance but had not signed the attendance register and Prof Van Vollenhoven was present during the meeting via MS Teams).

2.2 A meeting was held where the background to the BRKM was presented, the intention of Assmang Black Rock Mine Operations (BRMO) to mine the historical mine, and the results of the HIA were presented. The Concept study is currently being undertaken, where the options of open-cast or underground or a combination of open-cast and underground mining is being investigated. The proposed mining would extend the Life of Mine for another 16 years. If open-cast mining is chosen as a viable option, the entire historical koppie would be mined, and portions of the mine village would need to be relocated. Some houses/structures within the mine village are older than 60 years. The mine workers graves are located outside of the current mine working areas, however SAHRA expressed concern regarding the proposed expansion of the footprint if open cast mining were to take place and the potential blasting impacts to the mine workers graves.

2.3 SAHRA presented the purpose of the site assessment and invited Assmang BRMO, EScience and Archaetnos to attend the pending GDRC meeting where the results of the site assessment would be presented.

2.4 The site visit included visits to the historical mine entrance and shafts, old shoot, power station (sub-station), viewpoint of additional historical mining areas, decline shaft, water reservoirs, mine workers cemetery.

The historical mine entrance is in good condition with no signs of severe degradation. The BRMO monitor the water within the old mine site twice a year. Bats and porcupines often live in the shafts and tunnels. The condition of the tunnels was not assessed due to health and safety reasons (See Figure 3 to Figure 6).



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Figure 3: Entrance to historical mine



Figure 4: Close up of historical mine entrance



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Figure 5: Retevment walls at historical mine entrance



Figure 6: Historical mine shaft with a small rock fall



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The old shoot is in poor condition, and it seems as it may fall over at any point (See Figure 7 and Figure 8). The area is restricted to general mine workers.



Figure 7: Old shoot



Figure 8: Side view of old shoot



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The substation (noted as the power station in the HIA) is in an average state; however the walls and roof appear to be intact (See Figure 9 to Figure 11).



Figure 9: Historical Substation



Figure 10: Side view of substation structure



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Figure 11: Interior view of substation structure



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The viewpoint (Figure 12) provided us with a good view of the old mining methods, where tunnels were dug at an angle into the earth, often on top of each other. This was noted to be not a unique way of mining, but interesting.



Figure 12: View of additional historical mine shafts with the koppie in the background



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The water reservoirs (Figure 13) were viewed from a distance and appear to be in an average condition.



Figure 13: View of water reservoirs in the middle of the photograph

The surface structure for the decline shaft (Figure 14) is in a good condition, and it closed off.



Figure 14: Surface structure of decline shaft



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The mine workers cemetery is fenced with an entrance and an information sign stating that it is a heritage site protected by the NHRA (Figure 15 and Figure 16). The cemetery is overgrown but the graves are still in good condition, with no trees or bushes growing through them (See Figure 16 and Figure 17).



Figure 15: Information sign at cemetery



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Figure 16: Only legible grave marker



Figure 17: View of cemetery

We took a short drive through the mine village and noted one of the original houses within the village (Figure 18). It was viewed from the road and the preservation of the house was not assessed; however, it appears to be in good condition from the road.



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Figure 18: Historical house in mine village

3. RECOMMENDATIONS TO GDRC

3.1 The results and recommendations of the two HIAs conducted for the site differ as they did not base their grading recommendation on the same criteria.

The original HIA conducted in 2009 noted that the BRKM be graded as a Grade 1 site due to the following:

- The original Black Rock Mine represented the early history of manganese mining in South Africa; and
- The mines are world renown for unique minerals which are found nowhere else.

The mine company was happy to nominate the site as a Grade 1 site and a Heritage Management Plan was compiled, however, after deciding that it would be more economically viable to mine the site, a new HIA was commissioned. The second HIA conducted in 2021 provided a new significance assessment for the historical mine, stating it to be a site of Medium High significance however did not provide a recommended grading only stating that



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the site should not be considered as a National Heritage Site, focusing on the following criteria:

- The deposit at Black Rock was first identified in 1908, after manganese was first discovered in Postmasburg in 1886. Black Rock Mine was established in 1941, after mining operations had been established in 1927 in Postmasburg, thereby stating that Black Rock is not the earliest example of manganese mining in South Africa;
- No discussion regarding the unique mineral deposit at Black Rock Koppie, only stating that the Black Rock outcrop is known to date as the worlds largest banded ironstone formation hosted manganese deposit.

SAHRA does not have the in-house expertise to concisely grade the BRKM in terms of the criteria in section 3(3) of the NHRA. Therefore, the following is recommended to the GDRC:

- The GDRC approve a Provisional Protection declaration of the Black Rock Koppie Mine in terms of section 29(1)a(iii) of the NHRA i.e. "Provisionally protect any iii) heritage resource, the protection of which SAHRA or the provincial heritage resources authority wishes to investigate in terms of this Act";
- An investigation of the heritage resources to be conducted in terms of the heritage significance criteria as described in section 3(3) of the NHRA with regards to Grading status as described in section 7(1) of the NHRA;
- The investigation be conducted by an outsourced specialist appointed by SAHRA in order to compile an independent investigation of the significance of the BRKM;
- The results of the above noted investigation to be presented to the GDRC for their consideration.



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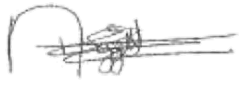

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Prepared by:		Supported by:	
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Date:	14/03/2022	Date:	14/03/2022

Resolutions:	
1	
2	
3	
4	
Approved by GDRC	
Ms. M Nkhasi-Lesaoana Chairperson: GDRC	
Date:	