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Attention: Gerda Bothma

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# Reference: BOOYSENDAL SOUTH, PHASE 2 EXPANSION PROJECT, STEELPOORT, LIMPOPO & MPUMALANGA PROVINCE SAHRA Case Number 12523

### HERITAGE STATEMENT – For the Part 2 Amendment for the Booysendal BS4 Vent Shafts.

#### 1. Introduction

GCS Water and Environment (Pty) Ltd has been appointed as the independent Environmental Assessment Practitioner by Booysendal Platinum (Pty) Ltd ("Booysendal") to compile and submit the appropriate documentation required for the Part 2 Amendment Application, in accordance with the NEMA: 2014 Environmental Impact Assessment ("EIA") Regulations. The amendments that are being applied for relate to the construction and operation of two ventilation shafts, including associated infrastructure, to be known as the "BS4 Vent Shafts".

Beyond Heritage was appointed to review the proposed amendment against the previous heritage impact assessment (van der Walt 2018), as indicated in the Figures below.

#### 2. Background information

Booysendal owns and operates a platinum group metal mine ("Booysendal Mine / Booysendal Operation"), approximately 33km west of Mashishing (Lydenburg), 40km south-southwest of Steelpoort, 32km north of Dullstroom and 21km northeast of Roossenekal.

The Booysendal Mine operates under two mining rights ("MR"), namely Booysendal North ("BN") MR (DMRE reference number: LP 30/5/1/3/21 (188) MR) and Booysendal South ("BS") MR (DMRE reference number: MP 30/5/1/2/3/2/1 (127/10333) MR). A locality map is included below.

The BS MR was acquired from Aquarius Platinum (Pty) Ltd in 2015. Although the two MRs have not been consolidated, the Booysendal Mine is managed as one integrated operation.

The northern section of the BN MR falls in the Limpopo Province, while the southern section of the BN MR and the entire BS MR falls in the Mpumalanga Province. The operational division for day-to-day management is in accordance with the provincial divide, where the northern section of the BN MR is managed as Booysendal North and the southern section (which is a combination of the southern section of the BN MR and the entire BS MR) as Booysendal South.

This application relates to the amendment of an environmental authorisation previously issued for the Booysendal South Mine to include the BS4 Vent Shafts.

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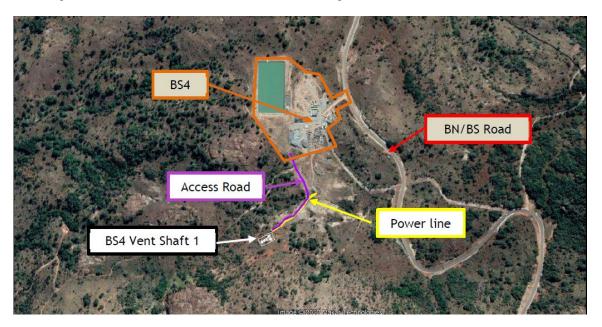
3. Project detail

Booysendal proposes the raise-boring and construction and operation of the two BS4 Vent Shafts, in the vicinity of the existing Valley Boxcut. Raise boring is a method used to drill shafts for ventilation. The proposed locations of the BS4 Vent Shafts are on an area of Portion 5 of the Farm Sterkfontein 52, Registration Division JT, Mpumalanga Province, owned by Booysendal and held under the BS MR ("Project Area").

The BS4 Vent Shafts are crucial for the development of the Booysendal South 1, 2 and 4 underground complexes, established for mining of the UG2 reef, and to ensure the health and safety of workers underground. They are also required to comply with the mine health and safety requirements. The ventilation design and requirements will be based on the mine design, production profile and underground equipment.

The footprints of the BS4 Vent Shafts, including the linear infrastructure, will be 9,000m2.

The first proposed ventilation shaft, BS4 Vent Shaft 1, with an extent of 0.2ha (including the vent fans, terrace and possible stormwater cut off drain), is located south-south-west of BS4. *Refer to Figure below*. It will be accessed by a proposed 295m road, of less than 4m in width, that will be developed on an existing track (see purple line) in a north-easterly direction towards BS4. A 11kV overhead power line ("OHPL") of 180m, following the access road route, will tee off from existing OHPL.



The second proposed ventilation shaft, BS4 Vent Shaft 2, also with an extent of 0.2ha (including the vent fans, terrace and possible stormwater cut off drain), is located south-west of BS4, towards the old Everest Mine on the main BN to BS mine access road (BN/BS Road). *Refer to the Figure below*.

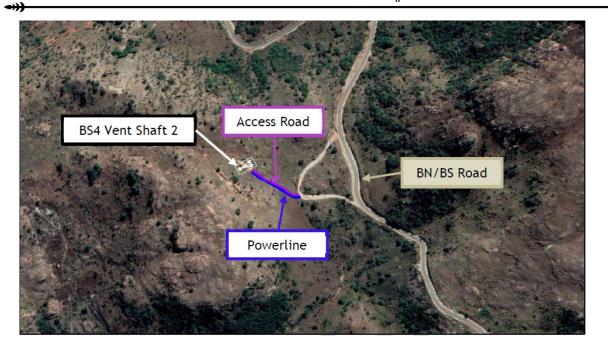
It will be accessed by a proposed 136m road, of less than 4m in width, which will join the BN/BS Road, through a previously disturbed area (see dark blue line) in a south-easterly direction towards BS4. A 11kV OHPL of 136m will be constructed following the new access road route, which will tee off from existing OHPL at the start of the new access road.

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During their operational phase, activities at the BS4 Vent Shafts will be limited to maintenance work on the ventilation systems and the portal areas. The BS4 Vent Shafts will be situated within a degraded area, with no indigenous vegetation present.

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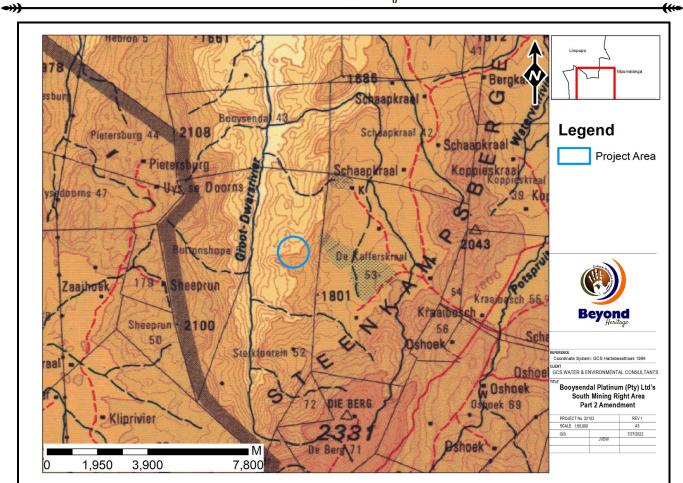


Figure 1. The location of the proposed amendment activities.

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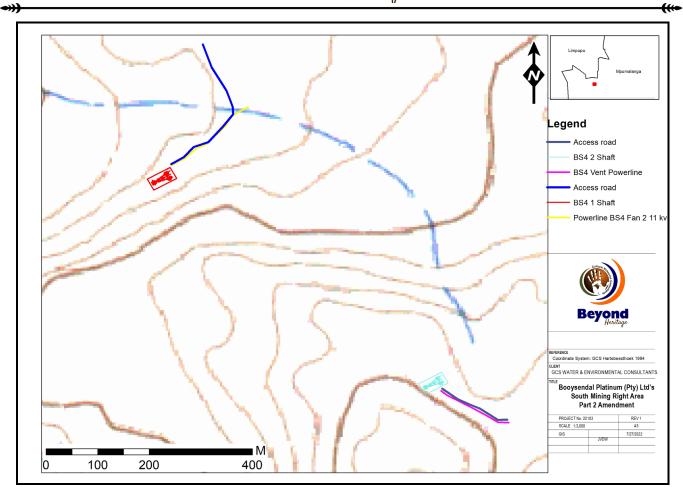


Figure 2. Local setting of the proposed BS 4 Vent Shafts.

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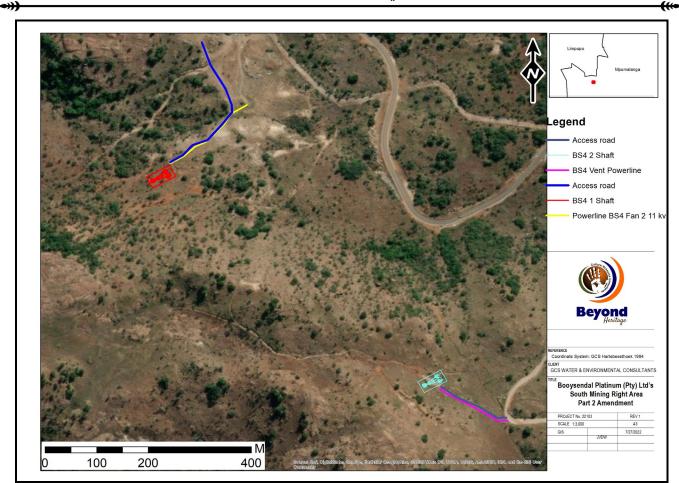


Figure 3. Aerial image of the Project Area.

## 4. Findings

Several assessments were conducted in the Project Area (e.g., Van der Walt 2018, Pistorius 2017, van der Walt & Celliers 2016, Huffman & Schoeman 2001, 2002a & b). The combined studies recorded 68 heritage sites/features, consisting of Iron Age Sites, ruins, cemeteries and graves; and stone cairns and terracing. In addition to the recorded heritage features, low-density scatters of isolated Stone Age artefacts were noted by Van der Walt (2018). These artefacts are classified as Middle Stone Age and consist of flakes and Levalois-type cores usually found in vertic soils and are not *in-situ*. This background scatters of artefacts do not constitute an archaeological site and are scattered too sparsely to be of any significance; apart from noting their presence, which has been done in previous reports (Huffman & Schoeman 2002a, van der Walt & Celliers 2016). None of these resources will be impacted on by the proposed BS 4 Vent Shafts.

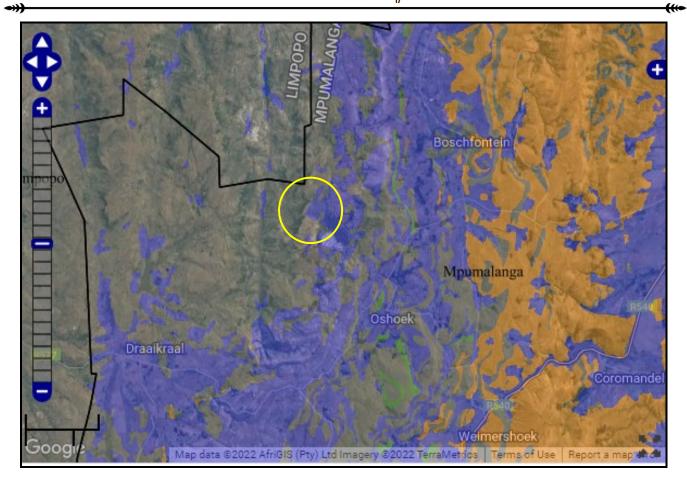
The palaeontology of the Booysendal South Expansion Project was assessed by Rubidge (2017), who concluded that it is extremely unlikely that fossils will be exposed as a result of this Project; and that the Project should continue with the implementation of a protocol for chance finds. The study area is indicated as insignificant to low paleontological sensitivity on the SAHRA paleontological sensitivity map; and no further studies are required for this aspect.

A physical inspection of the proposed BS4 Vent Shafts showed these to be in degraded areas that is already disturbed; and no surface evidence of heritage sites of significance was noted.

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| Colour        | Sensitivity        | Required Action                                                                                                                    |
|---------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------|
| RED           | VERY HIGH          | Field assessment and protocol for finds is required                                                                                |
| ORANGE/YELLOW | HIGH               | Desktop study is required and based on the outcome of the desktop study, a field assessment is likely                              |
| GREEN         | MODERATE           | Desktop study is required                                                                                                          |
| BLUE          | LOW                | No palaeontological studies are required however a protocol for finds is required                                                  |
| GREY          | INSIGNIFICANT/ZERO | No palaeontological studies are required                                                                                           |
| WHITE/CLEAR   | UNKNOWN            | These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map |

Figure 5 Paleontological sensitivity of the approximate Project Area (yellow polygon), as indicated on the SAHRA Palaeontological sensitivity map.

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Figure 6. General site conditions in the Project Area.

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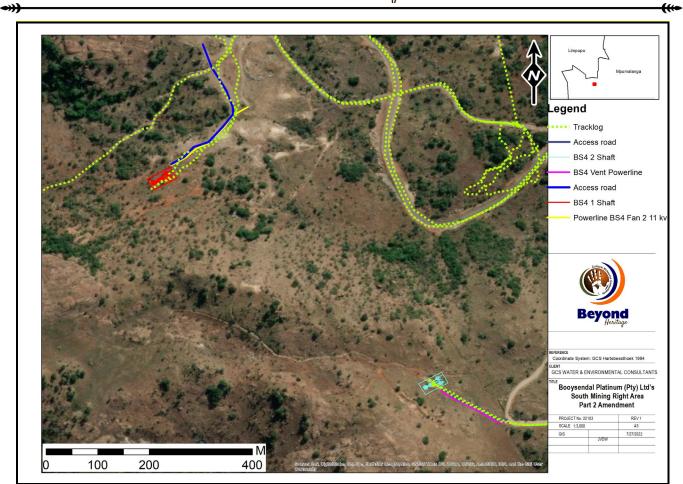


Figure 7. Survey path for the proposed BS4 Vent Shafts

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5. Heritage Opinion

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Based on the findings of the 2018 heritage assessment and the subsequent heritage fieldwork conducted in 2022 that focused on the BS4 Vent Shafts, there is no objection to the approval of the proposed amendment for the following reasons:

- The amendment will not change the nature or significance of the impacts assessed in the 2018 study and no heritage sites of significance were recorded in these areas;
- No additional management or mitigation measures over and above the recommendations made in the 2018 report (with special reference to chance find procedures) are applicable to the amendment.

The proposed amendment remains subject to approval from SAHRA.

Kindly contact me with any queries or concerns.

Sincerely

Jaco van der Walt

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#### References

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Beyond Heritage

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- Huffman, T.N. & Schoeman, M.H. 2001. Archaeological Assessment Of The Proposed Everest South Bulk Sampling Area. Unpublished report
- Huffman, T.N. & Schoeman, M.H. 2002a. Archaeological Reconnaissance Of The Everest South Bulk Sample Area And The Former Headquarters Of The Phetla Chief. Unpublished report.
- Huffman, T.N. & Schoeman, M.H. 2002b. *Archaeological Assessment of the Der Brochen Project, Mpumalanga.* Johannesburg: Archaeological Resources Management.
- Huffman, T.N. 2004/05. Archaeological mitigation for Project Lion. *Southern African Field Archaeology* 13 & 14: 42-48.
- Huffman, T.N. & Schoeman, M.H. 2011. Lebalelo: Early Iron Age pits near Burgersfort. *South African Archaeological Bulletin*
- Huffman, T.N. & Schoeman, M.H. 2002. *Further Archaeological reconnaissance for the Everest South Project*. Johannesburg: Archaeological Resources Management.
- Pistorius, J.C.C. 2017. A Phase I Archaeological And Heritage Impact Assessment (HIA Study For Booysendal South Expansion Environmental Authorisations
- Roodt, F. 2003a. *Der Brochen Tailings Dam Farms Helena and St George Mpumalanga Province.* Pietersburg: R & R Cultural Resource Consultants.
- Roodt, F. 2003b. *Der Brochen Project Helena Complex: Trial Mining Phase Mpumalanga Province*. Pietersburg: R & R Cultural Resource Consultants.
- Roodt, F. 2003c. *Der Brochen Project Richmond Complex: Trial Mining Phase Mpumalanga Province*. Pietersburg: R & R Cultural Resource Consultants.
- Roodt, F. 2008a. Der Brochen Mine Richmond 370KT Limpopo. Pietersburg: V.H.H.C. Heritage Consultants.
- Roodt, F. 2008b. *Der Brochen Mine Complex Mototolo Road Options Mpumalanga*. Pietersburg: V.H.H.C. Heritage Consultants.
- Rubidge, B. 2017. Desktop Palaeontological Impact Assessment Booysendal Mining extension development
- Van der Walt, J. 2009. Archaeological Impact assessment for the Water Pipe Line and Access Route for the Booysendal Platinum Mine, Steelpoort, Mpumalanga Province. Johannesburg: Wits Enterprise.
- Van der Walt, J. 2018. Heritage Impact Assessment Booysendal South Expansion Environmental Authorisations and EMP Amendment. Unpublished report.
- Van der Walt, J. & Celliers, J.P. 2009. Archaeological impact Assessment for the Booysendal Platinum Mine on the Farms Booysendal 43JT and Der Brochen 7JT, Steelpoort, Mpumalanga Province. Johannesburg: Wits Enterprise.
- Van der Walt, J. & Fourie, W. 2006. Archaeological Impact Assessment for Mining Development on the Farm Mareesburg 8JT, District Steelpoort. Krugersdorp: Matakoma Heritage consultants.
- Van Schalkwyk, J.A. 2005. *Heritage Impact Scoping Report for the Proposed Richmond Dam, Lydenburg District, Mpumalanga*. Pretoria: National Culture History Museum.