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RECONSIDERATION OF K2 MITIGATION MEASURES

The archaeological permit (no. 3219) issued by SAHRA on 17 March 2021 (valid until 31 March 2021) refers. This was a permit approving the mitigation measures that we had recommended for two Iron Age sites at Mapungubwe National Park. These are Schroda and K2. My letter specifically addresses the latter. The mitigation measures that we had initially recommended became necessary following a long history of soil erosion at the site. To appreciate the background to the ongoing erosion of soil at the site, the following must be noted:

1. The archaeological site had been subjected to extensive excavations over the years, which resulted in a heap of sand accumulating as the result.
2. A decision was made, and approved by SAHRA, to deposit such sand from the excavated area to the nearby sloping area. Doing so significantly changed the slope of this specific locality. As a result, soil erosion became significantly enhanced, becoming an ongoing concern for many years.
3. The deposited soil is sandy, making it difficult for it to be naturally compacted over time, thus worsening its erosion. There is clear evidence of archaeological material within the deposited soil. It's continued erosion thus threatens the archaeological integrity of the area and its surroundings, as these materials are now being continuously redeposited in 'newer' locations, leading to potential misinterpretation of the archaeological context within the greater vicinity.

It has not been for lack of attempts that soil erosion has continued unabated. But these efforts to avert soil erosion have not necessarily yielded positive results in the past. Our initial recommendations that were approved earlier this year were thus a continuation of such meaningful efforts. I briefly narrate these mitigation measures below:

1. Plantation of localised grass seeds in the affected areas.
2. Usage of plant logs in the areas facing soil erosion, to help in the accumulation of soil.
3. Making use of polymer to help strengthen the soil to withstand erosion. Most importantly, the use of this chemical would not have inhibited germination of seeds.

It was our thinking, as heritage managers, that these measures would help address the situation. Such confidence was informed by advice from previous ecological experts who visited the site, and the fact that there does not seem to have been adequate supervision and monitoring of previous interventions

to curb soil erosion. As a result, these previous attempts (i.e. planting grass and using logs) have not yielded results. We were, therefore, a lot more hopeful that if implemented under controlled intervention, these measures could still assist in significantly lowering the rate of soil erosion. However, and in the process of finalising discussions for the implementation of the approved mitigation measures, it became necessary to undertake yet another site visit.

Following extensive discussions on site, we have, therefore, had to revisit the mitigation measures we initially conceived for K2. This necessary change of approach was informed principally by the advice from SANParks ecologists. They argued that the failure of the previous efforts were not necessarily informed by lack of monitoring, but resulted mainly from the following specific issues:

1. The 'new slope' that was anthropogenically formed after the depositing of excavated soil is much steeper than the previous one that had been shaped naturally over the years.
2. The deposited soil has not been compacted over time, helping in its erosion down the slope and into the natural gully developing below.

Noting the two critical factors from an ecological viewpoint, we are, therefore, kindly requesting your approval of the amended intervention measures with regards to curbing soil erosion at K2. Our new recommendation entails the following:

1. Sourcing Google images to historically assess how the slope was prior to the deposition of soil from the excavated area.
2. Removing layers of the deposited soil, assisted by this Google images, with a view of taking it back to its former primary location. This will
3. Doing so will also, hopefully, assist in preventing the continued accumulation of water in the previously excavated area, leading to an existence of a man-made dam during rainy seasons.

These newly considered mitigation measures were previously discussed on site with some of the SAHRA colleagues from the APM Unit, even though they were not the ones presented to the entity when we initially sought approval for the archaeological permit. As per the ecological advice given, it has become necessary to revert to these measures that were previously considered.

Kind regards,



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