



Final Comment

In terms of Section 38(8) of the National Heritage Resources Act (Act 25 of 1999)

Attention: Mrs Tougheeda Aspelung
Environmental Resources Management
2nd Floor
The Great Westerford
240 Main Road
Rondebosch
7725

Environmental and Social Impact Assessment Report for the Gamsberg Zinc Mine and Associated Infrastructure in the Northern Cape

Morris, D. March 2013. *Archaeological and Cultural Heritage Investigation for the Environmental and Social Impact Assessment (ESIA) for the Gamsberg Zinc Mine and Associated Infrastructure in Northern Cape, South Africa*

Groenewald, G. April 2013. *Environmental and Social Impact Assessment (ESIA) for the Gamsberg Zinc Mine and Associated Infrastructure in Northern Cape Province Palaeontological Impact Assessment Desktop Study.*

Black Mountain Mining (Pty) Ltd has proposed the creation of a new open pit mine to exploit zinc ore from the Gamsberg inselberg. Black Mountain currently runs an existing operation at Aggeneys and an underground mine within the Gamsberg inselberg. In addition to the open pit zinc mine, associated infrastructure including tailings dam, waste rock dump and a zinc concentrator to be located on Bloemhoek Farm 61 Portion 1; Gams Farm 60 Portion 1; Remainder of Aroams Farm 57 and Gams Farm 60 Portion 4. There will also be a construction camp erected with an office complex; workshops; housing for contractors; servicing areas; temporary storage of materials; bulk fuel storage; bulk lubricant storage and a truck yard and vehicle parking. This application has been submitted before and received Environmental Authorisation, a process that included obtaining a Phase 2 mitigation permit for identified archaeological resources, but the Authorisation and permit have since lapsed.

The archaeologist notes that several field studies have been undertaken at Gamsberg, an area that the author divides into North of Gamsberg, South of Gamsberg and the Inselberg and Basin.

To the north, archaeological traces were minimal. Observations include a mid-twentieth century drilling site with associated stone structure (Site NG1); Ceramic Later Stone Age artefacts (NG2), including stone tools, ostrich eggshell and pottery, clustered around bedrock outcroppings containing ground grooves; and a single, isolated Early Stone Age cleaver below the inselberg (NG3). NG2 was recorded as having high significance, but will not be impacted by the proposed activities; the other two sites have low significance.

To the south, archaeological traces were richer and include the location of a site of possible San massacre (see SG7 below). Observations included a possible grave site consisting of two stone mounds and a third less





obvious concentration of stones (SG1); a Ceramic Later Stone Age scatter consisting of decorated ceramic sherds and a lug fragment, ostrich eggshell fragments, stone tools, some preserved bone as well as bottle glass and porcelain and a further possible burial cairn (SG2); a spread of archaeological traces of various ages, including LSA ostrich eggshell, pot sherds and a lower grindstone, a Colonial Period 'tierhok', a stone-built predator trap, and more recent traces of prospecting related activities (SG3). Further traces were a dense surface spread of LSA stone tools, pot sherds and ostrich eggshell (SG4); a Colonial Period stone wall and possible grave, with LSA artefacts and grinding grooves nearby (SG5). Other traces, located outside of the mining area included rain collecting hollows, known as !Gorras, occur on three adjacent bedrock exposures and are associated with LSA material (SG6); a kloof locally known to at least one farmer as 'Inkruip' is thought to be a place where the last of the area's San were shot, although no archaeological traces were identified (SG7); and Colonial Period rectangular, stone-built kraals to the east of the inselberg (SG8). SG1, SG2, SG4-8 were all identified as having high significance, while SG3 was identified as medium significance. SG1 and SG2 may be impacted by construction or mining activities.

The Gamsberg Inselberg and Basin contained few archaeological traces, being rocky and highly eroded. Observations included a Middle Stone Age workshop site that has been damaged by quarrying, but still exists as an *in situ* area of greater than 150m x 50m and to a depth of more than 100mm (GI1); a small shelter, disturbed by earlier mining activity, but with a single LSA quartz flake (GI2); scatters of low density MSA and ESA material, redeposited by water erosion (GI3). Two ESA sites were noted on the inner slopes of the basin, indicating possible ESA workshop activity (GI4 and GI5). GI6 consisted of low density, widely dispersed MSA artefacts. GI7 comprised a rock shelter with some deposit and possible faded finger painting, but no apparent archaeological material; it was noted that this shelter is beyond the proposed mine layout. Of these sites, GI1 was recorded as high significance and is likely to be impacted, GI2-6 were recorded as low, although GI2 and GI3 may be impacted; GI7 was recorded as having medium significance.

The author also surveyed the area proposed for the establishment of the housing development and waste water treatment works, but found these areas to be devoid of any archaeological material.

The Gamsberg inselberg belongs to the Namaqua Metamorphic Province, and more specifically, the Aggeneys Subgroup of the Bushmanland Group. This group has little palaeontological significance.

Ancient bedrock drainage channels are located between the inselbergs. These are filled with a variety of deposits, broadly assigned to the Kalahari Group. The report did not identify any specific areas of palaeontological sensitivity however, when fossils are found in this group, they are often significant.

As such, the mining of the zinc ore itself will not impact on any significant fossil resources however the development and construction of infrastructure associated with the mine in the areas between the inselbergs, associated with the Kalahari Group, may impact on significant fossils although the report indicates that this is unlikely.





Case Decision:

SAHRA supports the recommendations of the authors and requests that:

- The development footprint is restricted as far as possible to minimise the area to be impacted;
- All construction and operational activities are restricted to the designated working areas, which are all clearly marked and signposted;
- Sites NG1 and NG3 are sufficiently well recorded and of low significance and no further mitigation is required;
- Sites SG1, SG4 and SG7 should be identified as “no-go” areas and fenced off during the construction, operational and decommissioning phases. The protection of Site SG7 is of great importance as the site is highly significant and will be considered for Provincial Heritage Site status;
- In the case of sites SG 1 and SG 2 it is noted that the sites lie close to proposed power infrastructure; final layout plans need to be reviewed by an archaeologist and submitted to SAHRA. If these sites are to be impacted, SAHRA requests that they are subjected to Phase 2 mitigation in terms of Section 35 of the National Heritage Resources Act (Act 25 of 1999). The specialist will require a mitigation permit from the relevant Heritage Resources Authority. On receipt of a satisfactory mitigation (Phase 2) permit report from the archaeologist, the heritage authority will make further recommendations in terms of the site. Very often permission is given for the destruction of the remainder of the archaeological or palaeontological sites. Very rarely, if a site has high heritage significance the authority may request that it be conserved, that mini-site management plans, interpretive material and possibly protective infrastructure be established.
- Of the sites included in the now-lapsed SAHRA permits of November 2000, only GI1, GI2 and GI3 will be affected in terms of the revised layout and will require Phase 2 archaeological mitigation. As above, the specialist will need a permit from SAHRA to undertake this work, which will need to take place before commencement of the construction and operational phases;
- All decommissioning activities must be limited to the existing disturbed areas and as much of the mine infrastructure should be removed as possible during decommissioning, with all disturbed areas restored as closely as possible to their original state.

Should you have any further queries, please contact the designated official using the case number quoted above in the case header.

Yours faithfully





Kathryn Smuts
Heritage Officer: Archaeology
South African Heritage Resources Agency

Colette Scheermeyer
SAHRA Head Archaeologist
South African Heritage Resources Agency

ADMIN:

Direct URL to case: <http://www.sahra.org.za/node/118723>

Terms & Conditions:

1. This approval does not exonerate the applicant from obtaining local authority approval or any other necessary approval for proposed work.
2. If any heritage resources, including graves or human remains, are encountered they must be reported to SAHRA immediately.
3. SAHRA reserves the right to request additional information as required.



The South African Heritage Resources Agency

Street Address: 111 Harrington Street, Cape Town 8000 * Postal Address: PO Box 4637, Cape Town 8000
* Tel: +27 21 462 4502 * Fax: +27 21 462 4509 * Web: <http://www.sahra.org.za>