

May 2022

Project No. 21466019

NOTICE OF THE INTEGRATED REGULATORY PROCESS FOR THE PROPOSED ADDITIONAL INFRASTRUCTURE FOR THE GAMSBERG ZINC MINE 10 MILLION TON PER ANNUM OPERATION NEAR AGGENYS, NORTHERN CAPE PROVINCE

- Draft Basic Assessment Report available for public review

Dear Stakeholder,

Black Mountain Mining (Pty) Ltd. (BMM), a subsidiary of Vedanta Zinc International (VZI), operates the Black Mountain Mining Complex consisting of the underground Black Mountain Mine operations, Deeps, Swartberg, and the opencast Gamsberg Zinc Mine. The Black Mountain Mine complex mines zinc, lead, silver and copper and hoist 1.7 million tonnes (mt) of ore a year with a current production capacity of 90 000 tonnes per annum (tpa) metal-in-concentrate.

The Gamsberg Zinc Mine came into operation in June 2016 and mines approximately 4 million tonnes per annum (mtpa) and produces 250-300 tonnes per annum (tpa) of zinc concentrate per annum.

The mine is situated in the Namakwa District, Northern Cape and is approximately 120 km east of Springbok and approximately 270 km from Upington, between the towns of Aggeneys and Pofadder adjacent to the N14 national road. The Gamsberg Zinc Mine is located over three properties, namely Portion 1 of the farm Bloemhoek 61, Portion 1 of the farm Gams 60 and Portion 0 of farm Aroams 57.

BMM plans to mine a total of 150 mt of ore from the Gamsberg Zinc Mine over the Life of Mine (LoM). Of this expected LoM tonnage, approximately 18 mt of zinc concentrate will be extracted. Based on the relatively low grade of the zinc deposit, the treatment process will generate approximately 132 mt of tailings and approximately 1.5 billion tons of waste rock over the LoM.

The treatment of Run of Mine (ROM) ore at a current rate of 4.5 mt per annum with plans to increase to the planned 10 mt per annum at the processing plant yields about 9 mt per annum of tailings material which is disposed of at a tailings storage facility (TSF) located north of the N14 national road.

FUTURE INFRASTRUCTURE REQUIREMENTS

A number of existing environmental related authorisations are in place for the Gamsberg Zinc Mine. Furthermore, a permitting process was completed for the Gamsberg Smelter in 2020.

The mine currently requires further environmental related applications to authorise additional activities that are required for ongoing operations and which were not included in the previous authorisations, as well as changes

required in infrastructure layout as a result of optimised planning. These activities require an Environmental Authorisation (EA) as contemplated under Section 24 of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) (as amended), water use authorisation in terms of Chapter 4 of the National Water Act, 1998 (Act 36 of 1998) (NWA) and an Atmospheric Emission Licence (AEL) in terms of Section 38(3)(b) of the National Environmental Management: Air Quality Act (Act No. 39 of 2004).

PROPOSED INFRASTRUCTURE DEVELOPMENTS

New potable water pipeline

A new above-ground potable water pipeline is proposed to run from the Horseshoe dam to the processing plant. This pipeline will be developed in an existing servitude already in use for pipelines transporting water from Sedibeng Water to the mine. The location where the pipeline is proposed to be developed has already been cleared of vegetation as it is within a road reserve. The proposed pipeline will be installed above-ground and will have an inside diameter of 400 mm, an outside diameter of 460 mm, a throughput of 460 m³/hour and will be approximately 7 km in length. The entire pipeline will belong to Gamsberg Mine.

Expansion of dangerous goods storage facilities

To support the ongoing operations at Gamsberg Mine, an increase in storage capacity will be required for the following dangerous goods storage facilities:

- Fuel storage capacity which is proposed to increase from 600 m³ to 1 200 m³.
- Emulsion storage is proposed to be increased from 2 x 85t silos and 2 x 50t silos to 2 x 100t and 2 x 200t silos respectively.

Clean runoff attenuation system

To minimise pollution from the waste rock dump, ROM pad, crushers and conveyer infrastructure associated with the phase 1 and 2 plant infrastructure, it is proposed that the flow of the ephemeral riverbed that passes between the processing plant and the mining operations be altered.

The clean runoff attenuation system will include the construction of an attenuation weir, diversion berms, two above-ground pipelines for conveying any upstream runoff past the impacted area (processing plant and the mining operations) and an energy dispersion outlet structure. The altered section will be approximately 1.5 km in length.

The alteration will be in place for the duration of the operational phase of the mine and will then be rehabilitated during the decommissioning and closure phase.

The clean water attenuation system will require water use authorisation in terms of Chapter 4 of the NWA.

Refined layout for the waste rock dump and quartzite rock dump/berm

A waste rock dump facility, with a capacity to store 1.5 billion tons of waste rock on an area of 490 ha, is approved in the *Environmental and Social Impact Assessment (ESIA) Report for the Gamsberg Zinc Mine and Associated Infrastructure in the Northern Cape* (June 2013). It constitutes a permissible water use in terms of Gamsberg Zinc Mine, WUL No.14/D82C/ABCGIJ/2654.

In addition to the main waste rock dump facility and in order to mitigate the impacts on biodiversity as a result of the basin/crater mining activities, it was recommended that a rock dump / berm, comprising only quartzite rock, be designed and constructed to shield the remainder of the basin / crater from mining activities. It is

detailed in the *Environmental Management Programme (EMPr) for the Gamsberg Zinc Mine and Associated Infrastructure in the Northern Cape* (May 2013), that the berm should be constructed to the same elevation as the plateau comprising a non-acid leaching rock core and a quartzite rock outer layer. It is further stated that the placement of the barrier must be defined with input from a qualified botanist and the engineering team prior to the placement of the rock.

The Gamsberg Zinc Mine engineering team has refined the layout of the current waste rock to optimise the placement of waste rock, to avoid current mine infrastructure and to ensure safe operation of the facility. The updated waste rock dump layout is based on the storage capacity and footprint as approved in the 2013 ESIA and EMPr.

The 2013 EMPr does not include a final position and layout of the biodiversity protection rock dump / berm. The engineering team, in consultation with the biodiversity specialist has defined the final layout and position.

The updated waste rock dump layout and position of the biodiversity rock dump / berm will be included in the Basic Assessment Report.

The crater berm will form part of the crater storm water management system which is already authorised. This water use constitutes a permissible water use in terms of Gamsberg Zinc Mine WUL, No.14/D82C/ABCGIJ/2654.

Define layout for the crusher and coarse ore stockpile for plant phase 2

The 2013 ESIA states that the full production capacity of the mine will be 10 mtpa ore. This capacity will be reached in a modular approach following the mine ramp-up plan as described in the report. It is stated that the current concentrator plant will be ramped up in three modules to full capacity. It is indicated that the three phases of the concentrator plant will each consist of a concentrator stream with supporting utility and supporting infrastructure.

An amended concentrator plant boundary and shortened conveyor route was approved in the *Gamsberg Mine Environmental Management Programme Amendment* (December 2016). The information was presented at a high level and did not differentiate between the infrastructure components required for the three plant modules.

The Gamsberg Zinc Mine engineering team has defined the phase 2 plant components in preparation for construction. The updated conveyor and phase 2 concentrator plant layout will be included in the Basic Assessment Report.

Project Motivation

Black Mountain Mining (Pty) Ltd Gamsberg Zinc Mine obtained approval for a 10 mtpa open pit zinc mine under the NEMA during 2013 and in its Water Use Licence WUL, No.14/D82C/ABCGIJ/2654, dated 30 September 2014 (as amended) on 14 April 2016. It included approval for a concentrator plant and associated infrastructure, mining workshops and a tailings storage facility.

The open pit was developed in 2016 and the concentrator plant (phase 1) was constructed and commissioned in 2019. The initial mine and infrastructure development, referred to as phase 1, resulted in an operation capable of processing 4.8 mtpa.

Project approval was obtained internally to commence with the implementation of the second phase, referred to as phase 2, which entails the construction of the second stream of the concentrator plant and expanding the tailings storage facility to the full authorized footprint.

To ensure realisation of the full capacity of the approved 10 million ton mine, an environmental authorisation is required for additional infrastructure to improve the efficiency of the mining operations.

Expanding the mine to the full authorised capacity will realise the full social and financial benefit as indicated in the original EIA for the Gamsberg Zinc Mine.

ENVIRONMENTAL AUTHORISATION PROCESS

In terms of the National Environmental Management Act 107 of 1998 (NEMA) (as amended) and the Environmental Impact Assessment Regulations, 2014 (as amended), Gamsberg Zinc Mine is required to undertake a Basic Assessment Process and submit a Basic Assessment Report (BAR) and Environmental Management Programme (EMPr). The EMPr describes the potential environmental impacts of the proposed additional infrastructure and activities and how they will be mitigated and managed, to the competent authority for decision making. The competent authority responsible for the decision on whether to grant environmental authorisation is the Northern Cape Department of Mineral Resources and Energy (DMRE).

Gamsberg Mine also intends to submit an application for water use authorisation to the Department of Water and Sanitation (DWS) for water uses as specified in section 21(c) and (i) of the NWA. These water uses include:

- Section 21 (c) impeding or diverting the flow of water in a watercourse.
- Section 21 (i) altering the bed, banks, course or characteristics of a watercourse.

Additional to the water use licence, Gamsberg Zinc Mine also intends to submit an AEL for the fuel storage capacity on site which is proposed to increase from 600 m³ to 1 200 m³, thus triggering *Category 2 (Petroleum Industry, the production of gaseous and liquid fuels as well as petrochemicals from crude oil, coal, gas or biomass), Subcategory 2.4 for Storage and Handling of Petroleum Products*. This pertains to all permanent immobile liquid storage facilities at a single site with a combined storage capacity of greater than 1 000 m³.

Gamsberg Mine has appointed Golder Associates Africa (Pty) Ltd (Golder), now a member of WSP, an independent environmental and engineering consulting firm, to undertake the environmental authorisation process and application for water use and the AEL authorisation.

Invitation to register as an I&AP, to comment and attend a public meeting

Stakeholders are invited to register as Interested and Affected Parties (I&APs) and to participate in the environmental authorisation process by commenting on the proposed Basic Assessment Process as follows:

- Completing the enclosed Registration and Comment Sheet and return it to the Golder PP Office by post or email.
- Providing comments on the proposed project, draft Basic Assessment Report by contacting the Public Participation Office telephonically, by email or post.

I&APs are invited to register as stakeholders and comment on the draft Basic Assessment Report which is available for public review and comment for a period of 30 days from **Friday, 27 May 2022 until Monday, 27 June 2022**.

Printed copies of the draft Basic Assessment Report are available at the public places listed below. This background information letter and the draft Basic Assessment Report can be downloaded from the following websites: <https://www.golder.com/global-locations/africa/south-africa-public-documents/> or <https://vedanta-zincinternational.com/sustainability/reports/>

Name of Public Place	Contact Number
Pofadder Library, Loop Straat, Pofadder	054 933 0221
Aggeneys Library, Havelock Avenue, Aggeneys	054 983 2551
Pella Library, 129 Cathedral Street, Pella	054 971 0174
Khai-Ma Municipality/Sending (Onseepkans), R C Mission	054 933 1000
Black Mountain Mining, 1 Penge Road, Aggeneys	054 983 9373
Golder Associates Africa, Maxwell Office Park, Magwa Crescent West, Waterfall City	011 254 4800

A Focus Group Meeting is not planned at this stage however, if I&APs request such a meeting, it will be considered.

We would like to encourage you to actively participate in the environmental authorisation process. Should you wish to obtain more information to comment, please contact the Golder Public Participation (PP) office at (011) 254 4800, fax: 086 582 1561 or email: PPoffice@golder.co.za.

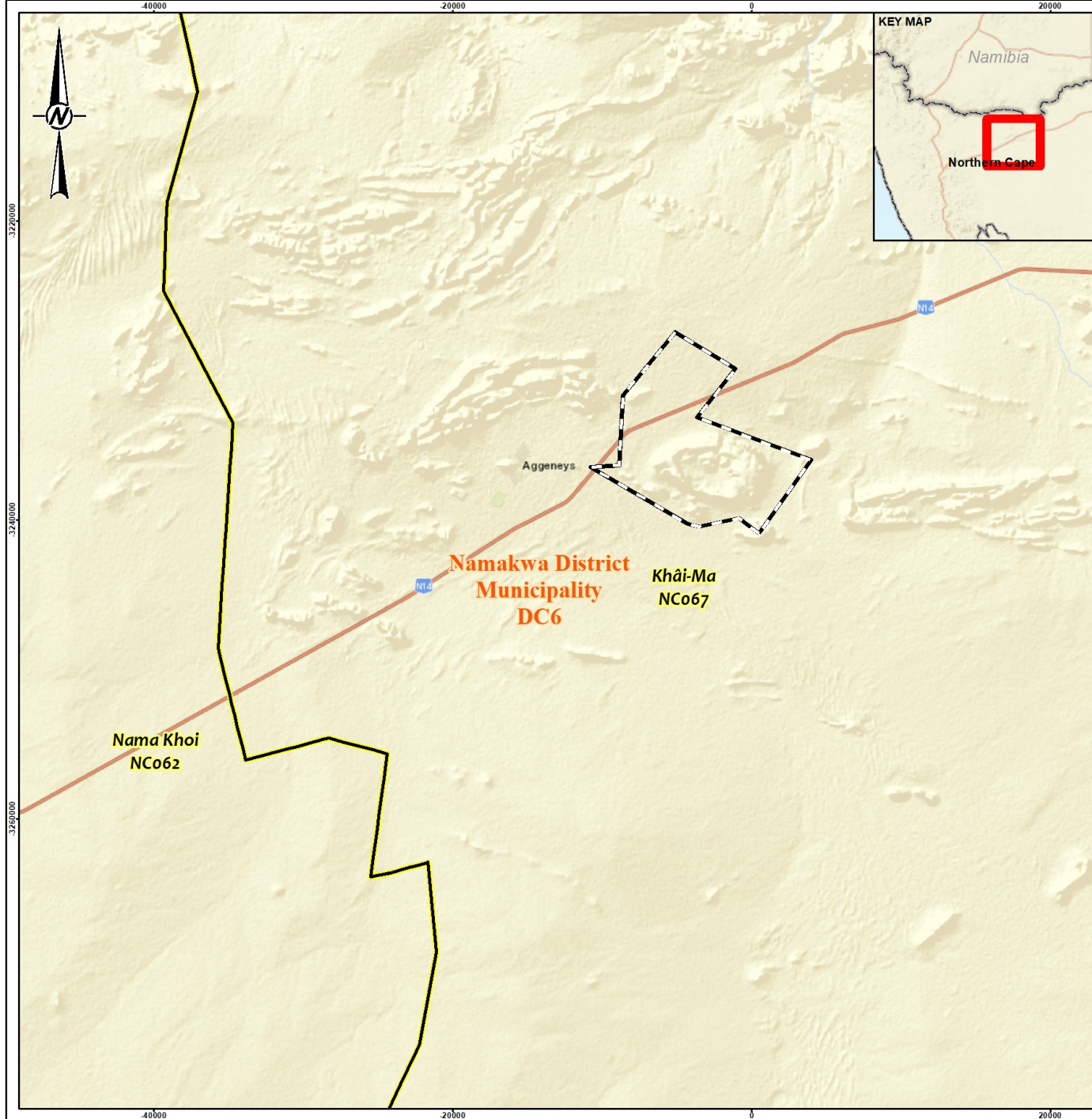
WAY FORWARD

After the public review period on the draft Basic Assessment Report has closed, the report will be updated and submitted to the Northern Cape DMRE for decision making.



Yours sincerely,

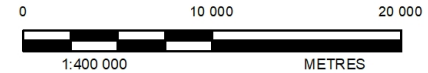
Golder Associates Africa (Pty) Ltd.

Attachments: Locality Map
Registration and Comment Sheet



LEGEND

-  Gamsberg (ML 5/2000)
-  Local Municipalities



NOTE(S)

1. LINE NOTES
2. LINE NOTES
3. LINE NOTES

REFERENCE(S)

1. COORDINATE SYSTEM: WGS LO19
2. SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT

VEDANTA

PROJECT

GAMSBERG ESIA

TITLE

LOCALITY

CONSULTANT



GOLDER
MEMBER OF WSP

YYYY-MM-DD 2022/05/06

DESIGNED

PREPARED TS

REVIEWED NM

APPROVED MS

PROJECT NO.

21466019

CONTROL

REV.

FIGURE

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**BASIC ASSESSMENT PROCESS AND
APPLICATION FOR WATER USE AUTHORISATION AND ATMOSPHERIC EMISSION LICENCE FOR
THE PROPOSED ADDITIONAL INFRASTRUCTURE FOR THE GAMSBERG 10 MILLION TON PER
ANNUM OPERATION NEAR AGGENYS, NAMAKWA DISTRICT, NORTHERN CAPE**



Registration and Comment Sheet

Draft Basic Assessment Report Review Period: Friday, 27 May 2022 to 27 June 2022

Your comments make an important contribution to these permitting processes. We would like to encourage you to register as an Interested and Affected Party (I&AP) so that we can keep you updated and can respond to any questions or concerns that you may have.

PERSONAL DETAILS			
Name	Surname	Title	Organisation / Department / Farm/ Community <i>(If applicable)</i>
Contact Details			
Mobile Number			
Office Number			
Home Number			
Fax Number			
Email Address			
Postal Address			Postal code
Golder, a member of WSP, will not share personal information with a third party			
LANDOWNERS			
If your property is adjacent to Gamsberg Zinc Mine, please tell us your farm name and erf/portion number			
WOULD YOU LIKE TO REGISTER AS AN INTERESTED AND AFFECTED PARTY? (Mark with an X)			YES NO
Preferred Method of Communication (Mark with an X)		Post	Email Fax
In terms of the EIA Regulations, 2014 (as amended), I disclose below any direct business, financial, personal or other interest that I may have in the approval or refusal of the application:		Date	
		Signature	

For internal use to confirm capture of stakeholder details into the stakeholder database	
Stakeholder database reference number	Signature of data capturer

