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Department:
Environment & Nature Conservation
NORTHERN CAPE PROVINCE
REPUBLIC OF SOUTH AFRICA

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BASIC ASSESMENT REPORT

(For official use only)

File Reference Number:	
Application Number:	
Date Received:	

Project applicant:	Black Mountain Mining		
Business reg. no./ID. no.:	2005/040096/07		
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Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner.
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

NO

If YES, please complete form XX for each specialist thus appointed:
Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail:

Proposed Bioremediation site for Black Mountain Mining, Farm Aggeneys 56/1, Aggeneys Northern Cape.

Black Mountain Mining (BMM) wants to establish a bioremediation site to treat between 500 kg but less than 1 ton of hydrocarbon contaminated soil and cardboard boxes per day. Using biological agents, soil and cardboard contaminated by hydrocarbons are treated, breaking down the hydrocarbon rings. This will have a massive cost reduction since all contaminated soils and cardboard at present, is sent to Vissershok, a hazardous waste disposal site.

BMM has already started with a small pilot project in order to test the potential for such a remediation process. Eco-Con was appointed as the contractor to construct the pilot bioremediation treatment site and facilitate the process. The results have been very positive and BMM want to license this site to start treating all contaminated soils and cardboard on site.

The treatment methodology was taken from the method statement (Appendix G) from the contractor, Eco-Con as well as liaison with the contractor via email. Hydrocarbon contaminated soil will be transported from the site identified and tipped within the designated demarcated area to undergo processing and final windrow formation. The site, approximately 630m², consists of a 1000micron liner which is placed over berms and a hollowed area. The liner is thick and very durable and is used to prevent leaching of any contaminants into the soil below. However, in this process, leaching is very unlikely to occur, and if it does occur, it will carry bacteria to eliminate the effect.

The contaminated soil and cardboard will be mixed with suitable organic matter. Following the introduction of the organic matter, the windrows will be turned and aerated regularly during the works with spades. At BMM aeration/ turning will done every 14 days of every second month.

The bioremediation process:

Natural occurring strains and forms of bacteria is used to digest petroleum hydrocarbon content of soil. For this facility a dry and wet application method is used to facilitate the bioremediation processes, due to Eco-con's low frequency visits.

The dry application method is called Supazorb, which is derived from a renewable source in Kwazulu-Natal. Pine needles' capulars contains the required bacteria. Organic matter like seedless compost may also be used in the event that soil density is too high. The organic matter that will be used can be described as pine needles and sometimes compost.

For the wet application method, a sprinkler system was installed to provide microbe enriched water to the contaminated soil. Microbe enriched water refers to used grey water transported from Kathu. The grey water is colonised prior to transportation to ensure sufficient amounts of aerobic bacteria colonies is available to digest contaminants and aerate the soil. Grey water is pumped from camp effluent tanks and treated, nitrated and phosphates serve as great growing catalysts. The sprinkler system is powered by a pump station with solar panels.

Bioremediated sand and boxes will then be used on site as rehabilitation sand on the mine.

The geographical coordinates of the proposed bioremediation site are:

Centre point: 29°15'12.23" S ; 18°47'42.9" E

Government Notice 921 A (7)

NEM:WA Category A, Activity 7

The treatment of hazardous waste using any form of treatment at a facility that has the capacity to process in excess of 500kg but less than 1 ton per day, excluding the treatment of effluent, wastewater or sewage.

Black Mountain aims to treat an average of 7,83 tons of contaminated sand and paper/ cardboard boxes per month, but this volume will vary from month to month. This application will be for the treatment of more than 500kg but less than 1 ton per day.

Access:

Access to the proposed site will be via existing access routes.

Civil and Electrical Services:

No civil or electrical services necessary. The sprinkler system is powered by a pump station with solar panels.

Ablution facilities:

Existing Black Mountain Mining ablution facilities will be utilised.

2. FEASIBLE AND REASONABLE ALTERNATIVES

“alternatives”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Paragraphs 3 – 13 below should be completed for each alternative.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Alternative:

Alternative S1¹ (preferred or only site alternative)

Alternative S2 (if any)

N/A

Alternative S3 (if any)

Latitude (S):

Longitude (E):

29°	15'	12.23" S	18°	47'	9.42" E
N/A	'		0	'	
N/A	'		0	'	

In the case of linear activities:

Alternative:

Latitude (S):

Longitude (E):

No Linear activities

Alternative S1 (preferred or only route alternative)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

N/A	'	0	'
0	'	0	'
0	'	0	'

Alternative S2 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

0	'	0	'
0	'	0	'
0	'	0	'

Alternative S3 (if any)

- Starting point of the activity
- Middle point of the activity

0	'	0	'
0	'	0	'

¹ "Alternative S.." refer to site alternatives.

- End point of the activity

o	'	o	'
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For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Alternative A1² (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

630 m ²
N/A m ²
N/A m ²

Length of the activity:

N/A no linear activities for the proposed development
N/A m
N/A m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

630 m ²
N/A m ²
N/A m ²

5. SITE ACCESS

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

YES	
m	

Describe the type of access road planned:

Access to the site will be via existing access routes.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

² "Alternative A.." refer to activity, process, technology or other alternatives.

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):
 - rivers;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.10 the positions from where photographs of the site were taken.

Please refer to Appendix A for the locality map, Layout Plan, and CBA Map

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

Please refer to Appendix B for Site Photographs

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

A facility illustration was requested from the applicant and will be included once received.

9. ACTIVITY MOTIVATION

The activity will have cost saving a massive cost reduction since all contaminated soils and carboard at present, is sent to Vissershok, a hazardous waste disposal site. The exact social-economic value of the activity could not be determined.

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R
What is the expected yearly income that will be generated by or as a result of the activity?	R
Will the activity contribute to service infrastructure?	YES
Is the activity a public amenity?	YES (indirectly)
How many new employment opportunities will be created in the development phase of the activity?	No additional jobs will be created. Existing Black Mountain Mine employers will be trained to handle the process.
What is the expected value of the employment opportunities during the development phase?	R N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A
How many permanent new employment opportunities will be created during the operational phase of the activity?	No additional jobs will be created. Existing Black Mountain Mine employers will be trained to handle the process.
What is the expected current value of the employment opportunities during the first 10 years?	R N/A
What percentage of this will accrue to previously disadvantaged individuals?	% N/A

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

The need existed for a more cost-effective way of handling and rehabilitating contaminated soil and carboard boxes/ paper. At present contaminated soil and boxes are disposed of at Vissershok, which is a Hazardous Waste Disposal site. By handling and rehabilitating contaminated soil and boxes on the mine itself, massive cost reductions can be made. Bioremediated sand ad boxes will then be used on site as rehabilitation sand on the mine.

Desirability can be equated to wise use of land. The site selected for the proposed bioremediation site is within Black Mountain Mining's existing recycling salvage yard. The area has been completely transformed and no natural vegetation will be lost.

Indicate any benefits that the activity will have for society in general:

Society will indirectly benefit from safe disposal of contaminated soil and boxes.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

Society will indirectly benefit from safe disposal of contaminated soil and boxes.

DESIRABILITY:			
1.	Does the proposed land use / development fit the surrounding area?	YES	
2.	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?	YES	
3.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES	
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
5.	Will the proposed land use / development impact on the sense of place?		NO
6.	Will the proposed land use / development set a precedent?		NO
7.	Will any person's rights be affected by the proposed land use / development?		NO
8.	Will the proposed land use / development compromise the "urban edge"?		NO
9.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		

BENEFITS:			
1.	Will the land use / development have any benefits for society in general?	YES	
2.	Explain: Society will indirectly benefit from safe disposal of contaminated soil and boxes.		
3.	Will the land use / development have any benefits for the local communities where it will be located?	YES	
4.	Explain: Community will indirectly benefit from safe disposal of contaminated soil and boxes.		

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
NEM:WA GN921 Category A, Activity 7	DMR	10/07/2017

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? NO

If yes, what estimated quantity will be produced per month?

How will the construction solid waste be disposed of (describe)?

Where will the construction solid waste be disposed of (describe)?

Will the activity produce solid waste during its operational phase? NO

If yes, what estimated quantity will be produced per month?

How will the solid waste be disposed of (describe)?

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation? NO

If yes, inform the competent authority and request a change to an application for scoping and EIA.

Is the activity that is being applied for a solid waste handling or treatment facility? NO

If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? NO

If yes, what estimated quantity will be produced per month?

Will the activity produce any effluent that will be treated and/or disposed of on site? NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility? NO

If yes, provide the particulars of the facility:

Facility name:	N/A		
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere? NO

If yes, is it controlled by any legislation of any sphere of government? NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

N/A

11(d) Generation of noise

Will the activity generate noise? NO

If yes, is it controlled by any legislation of any sphere of government? NO

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

N/A

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

Municipal	water board	groundwater	River, stream, dam or lake	other	the activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month: N/A

Does the activity require a water use permit from the Department of Water Affairs? NO

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

For the wet application a sprinkler system was installed which is powered by a pump station with solar panels.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No.
(e.g. A):

- Paragraphs 1 - 6 below must be completed for each alternative.

- Has a specialist been consulted to assist with the completion of this section? YES [REDACTED]

If YES, please complete form XX for each specialist thus appointed:
All specialist reports must be contained in Appendix D.

Please refer to Appendix D for the Botanical Statement from PB Consult. The Heritage Impact Assessment will still be included

1. GRADIENT OF THE SITE

Indicate the general gradient of the site

Alternative S1:

Site	Flat	1:50 –	1:20 –	1:15 –	1:10 –	1:7,5 –	Steeper
	X	1:20	1:15	1:10	1:7,5	1:5	than 1:5

Alternative S2 (if any):

Flat	1:50	–	1:20	–	1:15 – 1:10	1:10	–	1:7,5 – 1:5	Steeper than 1:5
	1:20		1:15			1:7,5			

Alternative S3 (if any):

Flat	1:50	–	1:20	–	1:15 – 1:10	1:10	–	1:7,5 – 1:5	Steeper than 1:5
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	1:20	1:15		1:7,5		
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley
- 2.6 Plain**
- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:	Alternative S2 (if any):	Alternative S3 (if any):
Shallow water table (less than 1.5m deep)	NO	YES NO	YES NO
Dolomite, sinkhole or doline areas	NO	YES NO	YES NO
Seasonally wet soils (often close to water bodies)	NO	YES NO	YES NO
Unstable rocky slopes or steep slopes with loose soil	NO	YES NO	YES NO
Dispersive soils (soils that dissolve in water)	NO	YES NO	YES NO
Soils with high clay content (clay fraction more than 40%)	NO	YES NO	YES NO
Any other unstable soil or geological feature	NO	YES NO	YES NO
An area sensitive to erosion	NO	YES NO	YES NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

- 4.1 Natural veld – good condition ^E
- 4.2 Natural veld – scattered aliens ^E
- 4.3 Natural veld with heavy alien infestation ^E
- 4.4 Veld dominated by alien species ^E
- 4.5 Gardens
- 4.6 Sport field
- 4.7 Cultivated land
- 4.8 Paved surface
- 4.9 Building or other structure
- 4.10 Bare soil**

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil X

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

- 5.1 Natural area
- 5.2 Low density residential
- 5.3 Medium density residential
- 5.4 High density residential
- 5.5 Informal residential^A
- 5.6 Retail commercial & warehousing
- 5.7 Light industrial
- 5.8 Medium industrial ^{AN}
- 5.9 Heavy industrial ^{AN}**
- 5.10 Power station
- 5.11 Office/consulting room

x

- 5.12 Military or police base/station/compound
- 5.13 Spoil heap or slimes dam^A
- 5.14 Quarry, sand or borrow pit
- 5.15 Dam or reservoir
- 5.16 Hospital/medical centre
- 5.17 School
- 5.18 Tertiary education facility
- 5.19 Church
- 5.20 Old age home
- 5.21 Sewage treatment plant^A
- 5.22 Train station or shunting yard ^N
- 5.23 Railway line ^N
- 5.24 Major road (4 lanes or more) ^N
- 5.25 Airport ^N
- 5.26 Harbour
- 5.27 Sport facilities
- 5.28 Golf course
- 5.29 Polo fields
- 5.30 Filling station ^H
- 5.31 Landfill or waste treatment site
- 5.32 Plantation
- 5.33 Agriculture
- 5.34 River, stream or wetland
- 5.35 Nature conservation area
- 5.36 Mountain, koppie or ridge
- 5.37 Museum
- 5.38 Historical building
- 5.39 Protected Area
- 5.40 Graveyard
- 5.41 Archaeological site
- 5.42 Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how this impact will / be impacted upon by the proposed activity.

If YES, specify and explain:	N/A
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If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:	The activity will fit in with surrounding activities on the property which consist of mining and industrial activities.
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If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:	N/A
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6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site?		Uncertain
If YES, explain:	A Heritage specialist will be consulted to assess if any archaeological or palaeontological resources will be impacted with the establishment of the bioremediation site	
If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.		
Briefly explain the findings of the specialist:	A Heritage specialist will be consulted to assess if any archaeological or palaeontological resources will be impacted with the establishment of the bioremediation site	
Will any building or structure older than 60 years be affected in any way?		NO
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?		NO
If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.		

SECTION C: PUBLIC PARTICIPATION

PLEASE REFER TO APPENDIX H FOR PROOF OF INITIAL PUBLIC PARTICIPATION PROCESS CONDUCTED

Public Participation was conducted for this proposed development in accordance with the requirements outlined in Regulation 41, 42,43 and 44 of the NEMA EIA Regulations, as well as the Department of Environmental Affairs and Development Planning's guideline on Public Participation 2011. The issues and concerns raised will be dealt with as part of this application. Each subsection of Regulation 41 contained in Chapter 6 of the NEMA EIA Regulations will be addressed separately to thereby demonstrate that all potential Interested and Affected Parties (I&AP's) were notified of the proposed development. Please refer to Appendix H for proof of Public Participation conducted.

Posters was displayed at the Black Mountain security office, on the fence of the site, two posters were placed Aggeneys road, at the entrance of the mine and the other side of the road. A poster was also placed at the OK grocer in Aggeneys (please refer to **Appendix H1** for proof of poster & **H2** for maildrop).

The posters contained all details as prescribed by R41 (3) (a) & (b) and the size of the on-site poster were 60cm by 42cm as prescribed by section 41 (4) (a).

An advert was placed in **Die Plattelander** on 26 January 2018 (Please refer to **Appendix H3 for proof of Advert**)

Notifications letters were sent to all interested and affected parties to invite them to register as an Interested and Affected Party (I&AP) to be kept up to date with the proposed development. Notification letters were also given to the BMM Environmental section to distribute (Please refer to **Appendix H4** for the Notification letters/ Handouts, **H2** for the maildrop, the stamp on the I&AP list **Appendix H5** proof that letters were sent).

A register of interested and affected parties (I&Aps) was opened and maintained. Any member of the public can request (in writing) to be a I&AP and will be kept up to date with developments in the project (Please refer to **Appendix H5** for the I&AP register). I&AP were given 30 days for comments during the initial public participation phase

A summary of issues raised by I&AP are addressed in the comments and response report. No comments were made during the first round of public participation. Please refer to **Appendix E** for the comments and response report.

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;

- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;
 - (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;

- (iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (c) placing an advertisement in—
- (i) one local newspaper; or
 - (ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;
- (d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
- (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
 - (iii) the nature and location of the activity to which the application relates;
 - (iv) where further information on the application or activity can be obtained; and
 - (iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application

can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

A summary of issues raised by I&AP are addressed in the comments and response report. No comments were made during the first round of public participation. Please Refer to **Appendix E** for the updated comments and response report.

6. AUTHORITY PARTICIPATION

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least 30 (thirty) calendar days before the submission of the application.

List of authorities informed:

DENC – Kimberley DENC – Springbok SAHRA – Northern Cape Northern Cape Department of Agriculture, Land reform and Rural Development Northern Cape Department of Water and Sanitation Department of Energy Northern Cape Department of Agriculture, Forestry and Fisheries
--

List of authorities from whom comments have been received:

None yet

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub regulation to the extent and in the manner as may be agreed to by the competent authority.

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

NO

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

No comments received up till now

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

None this far

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

None this far

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

Alternative (preferred alternative)

The proposed activity will have 3 phases: construction, operations and rehabilitation.

The site will be rehabilitated once decommissioning of the mine commences. The purpose of the activity is for the establishment of a bioremediation site for the treatment of hydrocarbon contaminated soils and cardboard boxes. The bioremediated soil and paper will then be used as rehabilitation sand on the mine.

In terms of mitigation and managed practice, the Environmental Management Programme (EMPr), Attached as **Appendix F**, contains site specific environmental management measures. Please also refer to **Appendix G** for the Method Statement from Eco-Con, the contractors appointed to handle the bioremediation process. The Method statement also discuss the sampling protocol (point 3.4). Soil samples will be taken in the windrows every 3 – 4 weeks, samples will be sent for laboratory testing at Potchefstroom University. Once the Total Petroleum Hydrocarbon (TPH) results are found to have achieved the remedial criteria agreed upon, Eco-Con will recommend redeposits of the treated material and confirm completion of the bioremediated works. This will then be communicated to the BMM Environmental Team for approval.

Construction Phase:

Construction will consist of excavating some sand to form a depression, excavated soil can be used to create a 'wall'.

Direct impacts:

The potential Impact on Fresh Water Ecosystems: It is very unlikely that the construction of the proposed bioremediation site will have an impact on any fresh water ecosystems. There are no watercourses in direct proximity to the proposed site.

Mitigation:

- No hazardous waste (i.e. fuel/ oil) will be stored on site.
- No refuelling of trucks/ excavator permitted on site
- The contractor should ensure drip trays are placed under stationary vehicles/ excavator/ TLB
- Importance must be given to emergency preparedness with regards to any spillages or leakage of hydrocarbons on site.
- Ensure spill kits are available on site to clean up potential spills and leaks. If a spill occurs during construction, contaminated soil should be taken to the storage site at BMM where other contaminated soil is stored, after construction of the bioremediation site the soil can be treated.
- The contractor is responsible for training of workers with regards to spill response.
- Spills need to be kept on record.

Potential loss of cultural or heritage aspects: A heritage impact assessment will still be conducted/ It is very unlikely to negligible that any heritage aspects will be affected at bioremediation site as the site is already disturbed.

Mitigation:

- If any archaeological remains (i.e. fossil bones and shells, coins, indigenous and/or colonial ceramics, any articles of value or antiquity, stone artefacts and bone remains, structures and other built features, rock art and rock engravings) are discovered during the construction/ operation phase, they must immediately be

reported to SAHRA and must not be disturbed further until the necessary approval has been obtained from SAHRA.

- Should any human remains/ burial or archaeological material be disturbed, exposed or discovered during construction/ operations, these should immediately be reported to the South African Heritage Resources Agency. The ECO and Engineer should also be informed.

Loss of vegetation: A biodiversity statement was conducted (**Appendix D**). At the proposed bioremediation site and its immediate surrounds is expected to have been covered with Bushmanland Sandy Grassland, a vegetation type classified as least threatened. However, it is important to note that no more natural veld remains on the proposed site or its surrounds and the loss of vegetation is negligible.

Mitigation:

- Work should remain within the demarcated area chosen for the bioremediation site.
- Topsoil must be removed and stored separately for re-use for rehabilitation purposes. The topsoil and vegetation should be placed over the disturbed area to provide a source of seed bed to encourage re-growth of the species removed during construction/ operation.
- The BMM ECO must oversee compliance to mitigation measures for this project.

Potential soil contamination from hydrocarbon spills: There is a likelihood that trucks and excavator/ TLB can potentially cause soil contamination from hydro-carbon spills while constructing the site.

Mitigation measures:

- No hazardous waste (i.e. fuel/ oil) will be stored on site.
- No refuelling of trucks/ excavator permitted on site
- The contractor should ensure drip trays are placed under stationary vehicles/ excavator/ TLB
- Importance must be given to emergency preparedness with regards to any spillages or leakage of hydrocarbons on site.
- Ensure spill kits are available on site to clean up potential spills and leaks. If a spill occurs during construction, contaminated soil should be taken to the storage site at BMM where other contaminated soil is stored, after construction of the bioremediation site the soil can be treated.
- The contractor is responsible for training of workers with regards to spill response.
- Spills need to be kept on record.

Potential Dust Pollution: There is a possibility of minimal dust pollution emanating from the excavation of topsoil in order to establish the site. It is expected that potential dust pollution will not have any significant impacts as there are no communities in close proximity to the proposed sites.

Mitigation measures:

- Dust will be monitored
- If dust becomes a problem, dust will be controlled by means of water spray vehicles or other practical means
- No over-watering of the mining area or roads surfaces should occur
- Workers will be provided with suitable PPE
- Under extreme windy conditions, work will be stopped

Operational Phase

Direct Impacts:

The potential Impact on Fresh Water Ecosystems: It is very unlikely that the proposed bioremediation site will have an impact on any fresh water ecosystems. There are no watercourses in direct proximity to the proposed site. It is also very unlikely that any ground water will be affected as windrows will be located on 1000-micron liner to prevent any leaching.

Mitigation:

- Windrows should be located on 1000-micron lining to prevent leaching and vertical migration of hydrocarbons. The liner must be thick and durable to prevent leaching of any containments into the soil below.

Dust Pollution: Due to the anticipated moisture content of the soils contained within the windrows, it is considered unlikely that airborne dust generation will be a problem during soils turning operations. The addition of organic matter is known to promote soil moisture retention.

Mitigation:

- All operations will be visually monitored by Eco-Con staff, should significant airborne dust be generated, works will be suspended until appropriate control measures have been put into place.
- Workers will be provided with suitable PPE
- Under extreme windy conditions, work will be stopped.

Odours: The majority of odours will be released during the initial excavation of contaminated soil from storage to the bioremediation site and will last for a relatively short period. With regards to bioremediation works, some odour release may occur during the initial turning phases of the treatment. The addition of organic matter and bioremediation process tends to bind odours, which should mitigate against the generation of excessive odours. The location of the site is in an area of the mine, which is considered to be of low sensitivity with regards to odour generation.

Rehabilitation Phase

The site will be rehabilitated once decommission of BMM commence.

Direct impacts:

Poor topsoil management: Poor management practices in terms of topsoil can potentially impact on biodiversity and compromise the regrowth of original vegetation, although the area is disturbed and transformed.

Mitigation:

- Where applicable, topsoil must be scrapped, prior to the disturbance occurring.
- Topsoil must be stockpiled and protected to be used for rehabilitation after construction/ operations.
- A topsoil management plan must be agreed upon site start up meeting.

Dust pollution from topsoil reestablishment:

Mitigation:

-
- Dust will be monitored
- If dust becomes a problem, dust will be controlled by means of water spray vehicles or other practical means.
- No over-watering of the mining area or roads surfaces should occur.
- Under extreme windy conditions work will be stopped.
- A topsoil management plan must be agreed upon site start up meeting.

Potential soil contamination from hydro carbon spills: There is a likelihood that trucks and excavator/ TLB can potentially cause soil contamination from hydro-carbon spills during decommissioning.

Mitigation measures:

- No hazardous waste (i.e. fuel/ oil) will be stored on site.
- No refuelling of trucks/ excavator permitted on site
- The contractor should ensure drip trays are placed under stationary vehicles/ excavator/ TLB
- Importance must be given to emergency preparedness with regards to any spillages or leakage of hydrocarbons on site.
- Ensure spill kits are available on site to clean up potential spills and leaks. If a spill occurs during construction, contaminated soil should be taken to the storage site at BMM where other contaminated soil is stored, after construction of the bioremediation site the soil can be treated.
- The contractor is responsible for training of workers with regards to spill response. Spills need to be kept on record.

Indirect impacts:

Indirect negative impact

Littering: Potential littering from workers on site

Mitigation:

- The contractor should do environmental training with all staff/ workers on site.
- The Contractor must supply waste bins/skips throughout the site at locations where mining and construction personnel or labourers are working. The bins must be

provided with lids and an external closing mechanism to prevent contents from blowing out, and must be scavenger proof to prevent animals attracted to waste. Bins must be emptied on a regular basis and the waste removed to the construction camp where it must be contained in scavenger, water and windproof containers until disposed of

- Trucks will be provided with binbags
- General waste should be disposed of at an appropriately licensed site.

Indirect Positive Impact:

Positive attributes to the environment (Biodiversity):

The establishment of the bioremediation site will ensure that contaminated soil and carboard be treated in the correct manner so that is does not negatively impact on the environment.

Legal compliance for Black Mountain Mining: By obtaining a waste license for establishing the bioremediation site the mine ensures that contaminated soil and carboard be treated in a legal manner.

Cumulative impacts:

The impact of the proposed bioremediation site on freshwater ecosystems, heritage, soil, vegetation and air pollution is expected to be of little significance, if the correct management and mitigation measures are in place and adhered to (Please also refer to the Impact assessment rating attached as **Appendix I**)

The indirect positive impact emanating from the proposed soil dump sites can be summarised as compliance in terms of waste management.

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Please refer to **Appendix I** for the impact rating methodology describing the impact, duration, likelihood and significance of the proposed activity on the environment and **the** actual impact assessment of the establishment of the bioremediation site

Impact assessment rating can be summarised:

The impact of the proposed bioremediation site on Biodiversity (Vegetation, CBAs/ ESAs/ Soil), Heritage resources, Water resources, Air pollution (dust) is rated as 'Very Low', and can be described as insignificant, if the correct mitigation measures are in place and complied to (Please refer to the Impact assessment rating attached as **Appendix I**).

The indirect positive impact emanating from the proposed soil dump sites can be summarised as legal compliance in terms of waste management.

No-go alternative (compulsory)

The no-go alternative would be the option of not establishing the bioremediation site

Although this option would result in no potential negative environmental impacts, the positive socio-economic impacts from the proposed activity will not be achieved. The activity is expected to contribute toward an improved environment in terms of biodiversity. The municipality would be legally compliant in terms of waste management/ disposal of contaminated soil/ carboard.

The proposed activity is not expected to have any negative environmental impacts; therefore there are no environmental benefits from not implementing the activity.

The no-go option would only have been recommended if it were found that the construction of the proposed development on this site or in this area might potentially cause substantial detrimental harm to the environment.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES	
YES	

Is an EMPr attached?

The EMPr must be attached as Appendix F.

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

Please refer to the Mitigation measures for each impact as described in section D2 above as well as the Mitigation column in the Impact Assessment Rating (**Appendix 1**). Site specific mitigation and control measures as recommended by the specialists are

discussed in Section 4 of the EMPr attached as **Appendix F.**

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

Appendix H: Public Participation Process

Appendix I1: Impact Assessment Methodology

Appendix I2: Impact Assessment Rating