

17 April 2014

ASSMANG MANGANESE BLACK ROCK MINE OPERATIONS

FINAL BASIC ASSESSMENT REPORT FOR THE CONSTRUCTION OF TECHNICAL TRAINING COLLEGE, KURUMAN, NORTHERN CAPE PROVINCE

Submitted to:

Northern Cape Province: Department of Environment & Nature Conservation

Attention: MR. MOSES RAMAKULUKUSHA (Case Officer)

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REPORT



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EXECUTIVE SUMMARY

1. Introduction and Project Description

The Applicant, Assmang Ltd – Manganese Black Rock Mine Operations, is making an Application for Environmental Authorisation for the construction of Technical Training College, Kuruman in the Northern Cape Province, in terms of the National Environmental Management Act, Act No. 107 of 1998 (as amended) and the Environmental Impact Assessment Regulations (2010).

This Application for Environmental Authorisation is being made to the Competent Authority, namely, the Northern Cape Province: Department of Environment & Nature Conservation and is required since the proposed development triggers activities which are listed in terms of the NEMA Environmental Impact Assessment Regulations (2010).

Environmental Assurance (Pty) Ltd has been appointed by Assmang Ltd – Manganese Black Rock Mine Operations to complete the Basic Assessment Process for the following development proposal:

A technical training college and associated infrastructure with a total development footprint of 15 ha. The initial development will be approx. 3 ha and shall include *inter alia*:

College - single and double storey buildings with:

- Parking facilities;
- Workshops;
- Recreational area including a swimming pool;
- Student enrolment / administrative area;
- Residential units;
- Dining facility;
- Media and computer area;
- Relevant services (water, sanitation and electrical); and
- Relevant road and storm water infrastructure.

2. Legislative Requirements

NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NO. 107 OF 1998) (AS AMENDED) AND THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REGULATIONS OF 2010:

National Environmental Management Act, Act 107 of 1998 (as amended) [NEMA] strives to regulate national environmental management policy and is focussed primarily on co-operative governance, public participation and sustainable development. NEMA makes provisions for co-operative environmental governance by establishing principles for decision making on matters affecting the environment, institutions that will promote

co-operative governance and procedures for co-ordinating environmental functions exercised by Organs of State and to provide for matters connected therewith.

The proposed construction and operational activities associated with the technical training college development falls within the ambit of the scheduled activities listed in Government Notice (GN) No. 544 and 545 and therefore requires compliance with the EIA Regulations of 2010, promulgated in terms of the National Environmental Management Act, Act 107 of 1998 (as amended). The proposed activity requires a Basic Assessment process as listed activities 9, 10, 22, 23, 37 & 38 under Government Notice No R. 544 are triggered.

NATIONAL FOREST ACT, 1998 (ACT 84 OF 1998)

The purposes of National Forest Act, 1998 (Act 84 of 1998) (NFA) includes *inter alia*:

(c) provide special measures for the protection of certain forests and trees:

(d) promote the sustainable use of forests for environmental, economic, educational, recreational, cultural, health and spiritual purposes.

The study area contains protected tree species identified in the NFA. Protected trees found in the study area includes: *Acacia erioloba* (commonly known as Camel Thorn or Kameel Doring), *Acacia haematoxylon* (commonly known as Grey Camel Thorn) and *Boscia albitrunca* (commonly known as Shepherd's tree).

The ecologist confirmed a total of **29** protected trees on site: consisting of 17 (seventeen) *Acacia erioloba* (Camel thorn tree) and 12 (twelve) *Acacia haematoxylon* (Grey Camel thorn tree). All infrastructure has been designed as to accommodate the protected trees found on site (i.e. incorporating them into the landscaping where possible).

A permit for the removal / destruction of protected trees will be applied for with the Department of Agriculture, Forestry and Fisheries (DAFF) in terms of the NFA.

NORTHERN CAPE PLANNING AND DEVELOPMENT ACT, 1998 (ACT 7 OF 1998)

An application for the rezoning and subdivision of the site was required and successfully completed. The site (previously known as A Portion of Erf 1 Kuruman) has been subdivided and is now known as Erf 5529 Kuruman and rezoned to Institutional Zone 1 with corresponding primary use – Place of Instruction (See attached Approval and Zoning Certificated as per Annexure G).

OTHER LEGISLATION

The requirements of the following legislation have also been considered in this Application for Environmental Authorisation:

- Constitution of South Africa (Act No. 108 of 1996);
- National Environmental Management: Biodiversity Act (Act No.10 of 2004);
- National Environmental Management: Air Quality Act (Act No. 39 of 2004);
- National Environmental Management: Waste Management Act (Act No. 59 of 2008);
- National Heritage Resource Act (Act No. 25 of 1999);
- Northern Cape Nature Conservation Act (Act 9 of 2009);
- National Veld and Forest Fires Act (Act 101 of 1998);
- Northern Cape Planning and Development Act (Act 7 of 1998);
- Occupational Health and Safety Act (Act No. 85 of 1993); and
- Provincial and local bylaws, policies and frameworks.

3. Receiving Environment

The proposed site (preferred and only location alternative – A1) for the development of the Assmang technical training college is located on Erf 5529 Kuruman in the Northern Cape Province. The site is situated on the N14 approximately 1.5km outside of the central business district of the town of Kuruman. The site falls within the municipal boundaries of the District Municipality of John Taolo Gaetsewe (Former Kgalagadi) and the Ga-Segonyana Local Municipality. The proposed site is a 15ha area of which some of the section has been used for pasture.

The following prominent features and land use features occur within a 500m radius of the site:

- Kuruman Hospital (Approx. 450 m north- west of the site boundary)
- Wrenchville residential area and school (Approx. 450 m north to north-east of the site boundary)
- Kuruman Country Club (Approx. 800 m south of the site boundary)
- El Dorado Hotel (Approx. 100m west of the site boundary)
- Kuruman Tributary (Approx. 300m east of the site boundary)

4. Alternatives

Alternatives are defined in the NEMA EIA Regulations (2010) as “*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; and (e) the operational aspects of the activity and (f) the option of not implementing the activity*”.

For the purpose of this application, the following Alternatives were considered (with A1 Alternatives assessed):

- **Location / Property Alternatives** [Erf 5529 (Alternative A1), Kuruman vs. Site next to Moffat Mission (Alternative A2)]
- **Design / Layout Alternatives** [Eastern layout (Alternative A1) of college vs. western layout (Alternative A2)]
- **Technology Alternatives** [Sustainable building and design (Alternative A1) vs. conventional building and design (Alternative A2)]
- **No-Go Alternative:** Compulsory.

TABLE 1: Summary of the qualitative and quantitative advantages and disadvantages of the alternatives

ALTERNATIVE	ADVANTAGES	DISADVANTAGES
Property Alternative A1 (Preferred and only alternative assessed)	<ul style="list-style-type: none"> ✓ Better general location in relation to the central business district of Kuruman (only 1.5km away); ✓ On-route to various mines and residential areas; ✓ Better layout configuration in terms of orientation and size to accommodate the technical college and associated infrastructure; ✓ Existing access point and road just of N14; and ✓ Existing connection points to existing service infrastructure (electricity and water supply). 	<ul style="list-style-type: none"> ◇ Dolomite and sinkholes found on site.
Property Alternative A2		<ul style="list-style-type: none"> ◇ No existing access point and roads; ◇ Inappropriate size and layout configuration to accommodate technical college and associated infrastructure; and ◇ Further away (4.5km) from central business district of Kuruman.
Technology Alternative A1 (Preferred and only alternative assessed)	Environmental: <ul style="list-style-type: none"> ✓ Energy efficient therefore conserving natural resources; ✓ Enhanced protection of 	Social and financial: <ul style="list-style-type: none"> ◇ High cost of sustainable building and design.

	<ul style="list-style-type: none"> ✓ biodiversity and ecosystems; ✓ Improve air and water quality ✓ Reduced waste streams; and ✓ Combats climate change. <p>Social and financial:</p> <ul style="list-style-type: none"> ✓ Lower operating costs (through energy savings)' ✓ Create, expand, and shape markets for green product and services ✓ Higher return on assets; ✓ Increased property values; ✓ Enhanced marketability; ✓ Reduced liability and risk; ✓ Responsible investing; ✓ Increased productivity; ✓ Attracting and retaining talent; ✓ Minimizing churn; ✓ Enhance occupant comfort and health; ✓ Heighten aesthetic qualities; ✓ Minimize strain on local infrastructure; and ✓ Improve overall quality of life. 	
Technology Alternative A2	<p>Social and financial:</p> <ul style="list-style-type: none"> ✓ Low cost of conventional building and design 	<p>Environmental:</p> <ul style="list-style-type: none"> ◇ Increase waste generation and volumes; ◇ Impact on natural resources; ◇ Inefficient energy utilization; and ◇ Air and water pollution.

5. Public Participation

The Public Participation Process (PPP) undertaken has been in accordance with the requirements of Regulations 54 – 57 of the Environmental Impact Assessment Regulations (2010) of NEMA.

The PPP tasks conducted included:

1. ***Identification of key interested and affected parties (affected and adjacent landowners) and other stakeholders (organs of state and other parties)***

2. ***Formal notification of the application to interested and affected parties (including all affected and adjacent landowners) and other stakeholders***

The project was announced as follows:

Newspaper advertisement

Publication of media advertisement in the Kalahari Bulletin Newspaper on 06 February 2014.

Site notice placement

In order to inform surrounding communities, affected and adjacent landowners of the proposed development, site notices were erected on site (04 February 2014) at visible locations close to the site.

Written notification

I&AP's and other key stakeholders were directly informed of the proposed development by e-mail / fax / letter on 11 February 2014.

3. ***Distribution of the Draft Basic Assessment Report and Environmental Management Programme***

The Draft Basic Assessment Report (DBAR) and Environmental Management Programme (EMP) were released for public review and comment for 40 calendar days (**11 February 2014 to 28 March 2014**). Hardcopies of the DSR was submitted to all Organs of State and relevant authorities. In addition, copies were placed at the Ga-Segonyana Public library (OASIS) (C/o Voortrekker and Skool Streets, Kuruman 053 7129359) and on the ENVASS website (www.envass.co.za) for review and download.

4. ***Consultation and correspondence with I&AP's and stakeholders***

All I&AP registrations and comments received has been formerly recorded in the Comments and Responses Report. Refer to Annexure E.

5. ***Distribution of the FINAL Basic Assessment Report and Environmental Management Programme***

The Final Basic Assessment Report (FBAR) and Environmental Management Programme (EMP) are herewith released for public review and comment for 21 calendar days (**17 April 2014 to 19 May 2014**). Hardcopies of the FBAR has been submitted to all Organs of State and relevant authorities. In addition, copies are placed at the Ga-Segonyana Public library (OASIS) (C/o Voortrekker and

Skool Streets, Kuruman 053 7129359) and on the ENVASS website (www.envass.co.za) for review and download.

ANY COMMENTS RAISED ON THE FBAR AND EMP MUST BE SUBMITTED THE COMPETENT AUTHORITY DIRECTLY:

Northern Cape Province: Department Of Environment & Nature Conservation
Attention: Moses Ramakulukusha (Case Officer)
Email: mramakulukusha@yahoo.com

Comments must please be copied to the EAP:

Rachelle Stofberg
Environmental Assurance (Pty) Ltd
Fax: 012 460 3071
Email: rachelle@envass.co.za
PO: 394 Tram Street Brooklyn Pretoria, South Africa

4. Environmental Impact Statement

Impact statement

The following key issues and potential impacts (direct and cumulative), has been identified.

TABLE 2: Potential impacts identified

NATURE OF IMPACT	DESCRIPTION OF IMPACT	STATUS	SIGNIFICANCE POST-MITIGATION
PREFERRED ALTERNATIVE A1 - CONSTRUCTION PHASE			
GEOLOGICAL	Potential for sinkholes to develop and the presence of an abundance of shallow dolomite pinnacles and flat areas of outcrop which will impede excavations for foundations and services.	Negative	Low
GEOLOGICAL	Contamination of soils through indiscriminate disposal of construction waste and accidental spillage of petroleum products.	Negative	Low
GEOLOGICAL	Soil erosion through vegetation clearance and soil compaction by heavy duty construction vehicles.	Negative	Low
BOTANICAL /	Potential loss of species and diversity through	Negative	Low

ECOLOGICAL	removal and clearance of vegetation.		
VISUAL	Visibility from sensitive receptors / visual scarring of the landscape as a result of the construction activities.	Negative	Low
HERITAGE / ARCHAEOLOGICAL	Damage to or destruction of archaeological resources during the construction.	Negative	Low
DUST	Dust impacts on the surrounding environment associated with construction activities.	Negative	Low
NOISE	Noise impacts on surrounding environment associated with construction activities (construction vehicles and equipment).	Negative	Low
WASTE	Generation of additional waste/litter and building rubble/hazardous material during the construction phase.	Negative	Low
SOCIO-ECONOMIC	Employment opportunities during the construction phase for local people.	Positive	Medium
TRAFFIC	Temporary disruption of traffic due to construction vehicles.	Negative	Low
HEALTH AND SAFETY	Health and safety impacts associated with construction activities.	Negative	Low
PREFERRED ALTERNATIVE A1 - OPERATIONAL PHASE			
WASTE	Generation of additional general waste/ litter hazardous material (workshops) during the operational phase.	Negative	Low
SOCIO-ECONOMIC	Skills development for historically disadvantaged individuals (HDI's) from the local communities in the Northern Cape Province. Individuals will be more employable which will benefit themselves, the workforce, the community and the economy.	Positive	High
VISUAL	Heightening of aesthetic qualities of the receiving area through modern green building.	Positive	Medium

HEALTH AND SAFETY	Health and safety impacts associated with training in the workshops.	Negative	Low
NOISE AND LIGHTING	Noise and lighting impacts associated with operations of the college.	Negative	Low
NO-GO ALTERNATIVE			
SOCIO-ECONOMIC	No skills development for historically disadvantaged individuals (HDI's) for the local communities in the Northern Cape Province. No net benefit to the community or industry.	Negative	High

5. Conclusion and Recommendations

A variety of mitigation measures have been identified in the EMP that will serve to mitigate the scale, intensity, duration or significance of the potential negative impacts identified to be applied during the construction and operational phases of the project. The proposed mitigatory measures, if implemented, will reduce the significance of the majority of the identified impacts. It is therefore the recommendation of Environmental Assurance, based on the assessment of the current available information, is that the Final Basic Assessment Report and EMP for the proposed development should be authorised by the Competent Authority. This authorisation should be in line with sensitive planning, design and good environmental management. The proposed construction and operation of the college will have significant positive social and economic impacts on local, provincial and national scales.