
MINUTES OF PUBLIC MEETING: EIA/EMP PHASE

APPLICANT: Mmakau Mining (Pty) Ltd

PROJECT: Schurvekop Coal Mine

PROJECT AREA: Farm Schurvekop 227 IS, Bethal, Mpumalanga

REF. #: MP30/5/1/2/2/10160MR

7 September 2017

Dear Sir / Madam;

Please find attached minutes of the recent EIA/EMP phase public meeting held at the Bethal Public Library for your perusal.

Should you have any changes / comments with regards to the minutes kindly contact Michelle Venter on Tel: (011) 7947534 or Fax: (011) 794 6946 or michelle@cabangaenvironmental.co.za

Thank you and regards,

Michelle Venter



MINUTES OF MEETING

PROJECT NAME: Schurvekop Coal Mine
DATE: 30 August 2017
TIME: 09:00am
LOCATION: Bethal Public Library

1. Attendance:

Name:	Initial:	Company / Farm / Institution:
Ken van Rooyen	KvR	Cabanga Environmental (Chairman)
Jane Barrett	JB	Cabanga Environmental (Presenter)
Michelle Venter	MV	Cabanga Environmental (Minutes)
Michael Nkomo	MN	MTS Holdings
Kobie Badenhorst	KB	MRCT
William Seabi	WS	Exxaro
Jan Venter	JV	DARDLEA
Ellen	MT	Mokgolokwe Trading
Sonnyboy Matlebula	SM	MCO
Zanele Sithole	ZA	I&AP
Alwyn Bosman	AB	I&AP
Fikile Shadrack Mabuye	FSM	I&AP
Jabu Sibanye	JS	I&AP
Dudu Ndinisa	DN	GMM
Mnezi Gcina Mnisi	MGM	Black Youth Business Council
Sbusiso Masinu	SM	YCCISA
Mitchell JK	MJK	CPF Emzini
Lindakhule Magogula	LM	GSDM



Jabu Mahlangu	JM	Elainment
Louise Nyokana	LN	Department of Health
Moses Khumalo	MK	Schurvekop
Godfrey Masagula	GM	Operator Ex.
Fortune Mabizela	FM	Sincere Enterprises
Joseph Mtsweni	JM 2	GMM- Ward Councilor

2. Opening & Welcome:

- Ken van Rooyen opened the meeting and welcomed the attendees.
- Outlined the agenda and format of the meeting.
- KvR introduced himself, noted that Cabanga had been appointed as the environmental assessment practitioners to undertake the environmental application process. Stated that he would be chairing the meeting, and that Jane Barrett (JB) would be presenting whilst Michelle Venter (MV) would be compiling the minutes.
- Explained that the applicant was Mmakau Coal, a joint venture between Mmakau Mining and Exxaro Coal.
- Introduced Mmakau Coal's project manager, Kobie Badenhorst (KB) and Micheal Nkomo (MN) from MTS Holding, responsible for the compilation of the Social and Labour Plan (S&LP).

3. Purpose of the Meeting:

- Jane Barrett (JB) explained that this was the second public participation meeting, the first meeting was held in November 2017 during the Scoping Phase. The Scoping meeting focused on the plan of study for the Environmental Impact Assessment (EIA) Phase of the project as well as the S&LP. Today's meeting will however focus on the EIA and Environmental Management Plan report (EMPr) currently out for public review and comment.
- Explained that it is not possible to go through the entire EIA EMPr during the meeting, so will be looking at the impacts that were of concern to Interested & Affected Parties (I&APs) during the Scoping Phase; as well as significant impacts identified by the Specialists.
- The EIA EMPr is currently available at the Library, on the Internet and at the Schurvekop Community for review and comment until the 6th September 2017. All comments received from today's meeting as well as the review and comment period

will be included in the final EIA EMPr for submission to the Department of Mineral Resources (DMR).

- The DMR considers impacts and mitigations and makes a decision on whether Environmental Authorisation will be granted or not.

4. Project Description:

- The project area is located 20 km north of Bethal, Mpumalanga. Portions 6, 8, RE15, 16, 17, 18, 19 and 20 the farm Schurvekop 227 IS are included in the Mining Right Application, totaling approximately 697 hectares. The site is adjacent to Exxaro's Forzando South operations and Anglo's Elder Colliery.
- The site is currently greenfields, which means there is no mining occurring at the moment, and the site is largely used for agricultural purposes at the moment.
- The mineral to be mined is coal. This will be mined underground by means of bord-and-pillar methods accessed via a boxut adit. The adit and associated surface infrastructure will be limited to Portion 8 currently owned by Mmakau.
- The average depth of mining is 60m. A rock mechanic and geotechnical investigation has been completed which indicates that a safety factor of 2 is required in the main panels, whilst a safety factor of 1.6 is applicable to the secondary panels. This is to ensure safe mine and prevent any surface collapse.
- The life of mine is currently estimated at 14 years, and 279 permanent jobs are expected however this will be through a core contractor still to be identified.
- The coal will be conveyed from the underground to the surface for processing (crushing, screening and washing) at the plant. The water requirement for the plant is around 256,740m³ per annum which will be sourced from the underground workings.
- Coal will be trucked to market (Eskom power plants), via a farm road off the R35.
- Discard and slurry will be generated as a result of the wash plant, and this will require a discard dump facility. Engineering designs indicate that the dump will be 40m high and occupy a footprint of 12.5 hectares. The safety risk of the dump has been assessed by the Engineers and is considered to have a low safety risk.

5. Principal Laws & Applications:

- South Africa has a number of Environmental Laws in place, with which a new development or mine must comply before they can commence.
- The principal authorisations required for the proposed Schurvekop Mine include a Mining Right in terms of the Minerals and Petroleum Development Act; Environmental Authorisation in terms of the National Environmental Management Act; a Waste

Management License in terms of the Waste Management Act and a Water Use License in terms of the National Water Act.

- Other authorisations are also required in terms of managing emissions; relocating endangered species; identifying graves and heritage sites and rezoning.

6. Environmental Authorisation Process:

- Before a Mining Right is issued Environmental Authorisation must be granted.
- As the application relates to mining, the application is subject to a Scoping and EIA process. We are currently in the EIA Phase of the project.
- The EIA EMPr is an integrated report which incorporates the findings of all the different specialists, as well as the various impacts and issues raised by I&APs. The significance of these impacts are rated firstly, on a worst case scenario (pre-mitigation) and then again post mitigation. This is done to see if it is possible to avoid or reduce the impacts associated with the project.
- The EMPr also includes monitoring and compliance, to ensure these mitigation measures are in fact working during the life of the mine.

7. Summary of Specialist Findings (*please refer to slides for more information and the EIA EMPr for detailed information*):

- Soils, Land Use & Capability: Five soil forms identified on site including Longlands, Tukululu, Katspruit, Sepane and Mitspah. These were mapped accordingly and their land capability and agricultural potential rated. The findings of the study indicate that the land capability and agricultural potential for the mining right area ranged from moderate cultivation with good potential to moderate grazing with restricted potential.
- Mitigation measures to preserve soil quality includes stripping and stockpiling soils separately, apply erosion and compaction measures and applying general good housekeeping.
- The dominant soil forms identified on site showed signs of moisture which indicated that these were functioning as interflow soils. A hydropedology study was then completed which confirmed that water was moving laterally through the soils at a depth between 20-100cm. This means that the soils in the area are important for the health of the surrounding wetlands, as they are playing a role in feeding them with water.
- Four wetland types were identified on site, these included Floodplain, Seepage, Flat and Depression. The wetlands have largely been impacted on by agricultural

activities and the Present Ecological Status is largely considered to be moderately modified.

- Due to the moisture content of the soil, a large portion of the Portion 8 has been identified as hillslope seep, and so wetlands will be directly impacted on by the proposed mining operations.
- The Joubertsvelispruit enters the site from the south and confluences with the Viskuile River which enters the Mining Right Area from the east; after which they flow north-west before converging with the Olifants.
- Baseline water samples indicate that the water is generally of good quality however there are signs that the Viskuile is starting to be impacted on by agricultural activities and that the Olifants is being impacted on by upstream mining operations.
- Mitigation measures to protect water resources including wetlands include implementing buffer zones, using existing roads as far as possible, separating clean and dirty water on site, containing all dirty water within lined facilities and general good housekeeping.
- Two main aquifers were identified in the project area, the upper weathered material aquifer and the lower fractured rock aquifer. The depth to the groundwater table ranges between 2.37 – 11.3 mbgl.
- Baseline sampling indicates that the groundwater quality is good and generally complies with the SANS Drinking Water Standards.
- Acid base accounting tests conducted on the coal seam indicates that the coal and waste rock are likely to be acid generating.
- Groundwater inflow into the mine workings has been estimated at 130m³ per day for the first year of mining, and 860m³ per day at the end of life of mine. Water will be pumped out of the underground to ensure that mining can continue safely, and this water will be pumped to the plant for use in processing. As result the groundwater levels will drop. The impact on the fractured rock aquifer will be quite significant, and will impact on privately owned boreholes within the Mining Right area.
- In terms of water quality the pollution plume was modelled on a worst case scenario. The upper weathered aquifer is at risk from pollution from surface sources such as the dams, stockpiles, the discard dump and hydrocarbon spoils. This impact is expected to remain local (less than 1km from the point source at 1-3% concentration). Recommendations to mitigate this include lining the different facilities with a Class C barrier or equivalent and general good housekeeping practices to limit the possibility of pollution.
- Deeper fractured rock aquifer – plumes are expected to migrate around 1.4km and 1.1km from the 2 seam and 4 workings and will underlie the Viskuile River and the

Joubertsveispruit. However, due to depth it is not expected that this will impact on surface qualities.

- It is expected that the Mr. Bosman and the Schurvekop Community will need to be supplied with an alternative water supply. Other mitigation measures to proposed include sealing off high yielding inflow zones into the underground workings, monitoring water quality and ground water levels and lining potential pollution sources on surface.
- The site falls within the Eastern Highveld Grassland, which is currently listed as Vulnerable. The site has largely been cultivated however natural areas are associated with some of the wetland areas, the riverine habitat and the rocky outcrop. The riverine habitat associated with the Joubertsvele and Viskule River have been identified as an ecological support corridor in terms of the Mpumalanga Conservation Plan.
- Fauna and floral surveys were undertaken during summer and winter, during which a number of species of conservation concern (protected species) were identified. Again, these sensitive habitats were largely associated with the natural areas.
- The siting of the boxcut adit and supporting infrastructure has been placed to avoid all the sensitive habitats, rivers, floodlines as far as possible. Additional mitigation measures proposed include relocating species of conservation concern, implementing an alien invasive programme, minimising the overall disturbance footprint, enforcing speed limits, providing environmental awareness training and the use of indigenous grasses for rehabilitation.
- In terms of air quality, the area falls within a Highveld Priority area (HPA). The predominant wind direction is from the north-west and north east quadrants.
- Air quality dispersion models have been compiled for the proposed operation based on the worst case scenario i.e. before mitigation. The study indicates the following:
 - During construction the dust fallout, for large particle dust or nuisance dust will comply with the residential limits in the northern and eastern boundaries with exceedances expected on the western boundary and along the haul road (exceedances indicated in orange and pink on the relevant slides).
 - During operations the dust fallout is expected to comply with the relevant residential and non-residential limits with the exception of the western boundary.
 - PM10 and PM2.5 are your dust particles which are smaller than 10 and 2.5 microns in size and can be inhaled. The model indicates that the exceedances are expected during the construction and operational phases if no mitigation is implemented.

- Mitigation measures to limit the impacts on the air quality include dust suppression through wetting and the use of binding agents, enforcing speed limits, re-vegetating disturbed areas as soon as possible, concurrent rehabilitation of the side slopes of the discard dump, ensuring that all trucks are covered before leaving site and monitoring for dust fallout, PM10 and PM2.5
- Blasting will only occur during the construction phase, when the boxcut is excavated. No blasting will be undertaken during the operational phases as mining will be undertaken by continuous miners (machinery).
- A blast and vibration study was undertaken and all infrastructure within 3.5km radius mapped and identified accordingly. Limits are then applied according to the type of infrastructure, e.g. a new building built with strong lentils can withstand higher levels of air blast and ground vibration as opposed to an informal structure. The nearest public house is located 598m from the proposed boxcut, the unsafe zone calculated for the fly rock is at 172m.
- The impacts of the blast were modeled on the worst case scenario, being a maximum charge mass of 1,360kg. The results indicate that the ground vibrations and air blast may cause some windows to shake and rattle but that no structural damage is likely to occur.
- Two access routes to the mine have been proposed. The preferred option is via the farm road off the R35, as this bypasses the community.
- A transport impact study was completed for the proposed operations which indicate that traffic during the construction and operational phase should not have a major impact on the surrounding network.
 - Recommendations were however proposed with regards to upgrading the intersection to the R35 and the existing farm road.
- Four graveyards or grave sites were identified during the Heritage Study, these all fall outside the boxcut adit and infrastructure footprint area. These will be managed in-situ and zoned as no go areas.
- Socio economic impacts associated with the project include those associated with the various environmental issues, the change in land use, health and safety, influx of workers into the area etc. Mitigations measures proposed include local employment and procurement as per the S&LP.
- Cannot provide more details on the S&LP projects or social upliftment projects at this stage, this will only be finalized once authorisation has been issued and once the board has approved the Financial Model.

8. Way Forward:

- Minutes of the meeting and a copy of the presentation will be sent to all registered I&APs.
- The draft EIA EMP Report is currently available for review and comment for a period of thirty (30) days, until the 6th September 2017. The report is available at the following locations:
 - The Bethal Public Library
 - The Schurvekop Community (care of Joseph Mtsweni)
 - www.cabangaconcepts.co.za (under the public participation tab)
- Comments and concerns can be sent directly to Cabanga, these will be included in the final EIA EMP report for submission to the Department of Mineral Resources (DMR).
- Once a decision has been made by the DMR on the application, all registered I&APs will be notified of the outcome and their right to appeal.

9. Way Forward:

10. KvR opened the floor for a questions and answers session

Interested and Affected Party	Issues/Question raised	Response
Environmental Questions and Answers :		
Louise Nyokana (LN)	I am from Department of Health. The mine will affect the community's water supply, there will be dust issues and blasting will affect their homes. Will there be social upliftment?	<p>The blast and vibration study indicates that there should be no damage to property from the blasting.</p> <p>With regards to air quality mitigation measures have been proposed, further to this it has been recommended that PM2.5 and PM10 monitoring be conducted in addition to the normal dust fallout monitoring.</p> <p>The mine will need to supply the community with an alternative water supply either by treating the water or drilling new boreholes or bringing water onto site.</p> <p>Cannot make commitments at this stage with regards to Social upliftment projects, as the Mine has not yet been approved. Authorisation is still required from the DMR, and the Board still needs to approve the Financial Model.</p> <p>Projects will be undertaken as per the S&LP, recommended that the Mine Management, S&LP consultants and the Community representatives meet to discuss the way forward.</p>

Lindakhule Magogula (LM)	What re-assurance is there that the mine will be rehabilitated and not abandoned?	Financial Provision must be updated annually for rehabilitation and submitted to the DMR for approval.
Louise Nyokana (LN)	The mine will impact on the Community's water supply. What provision or commitment is there that they will be supplied with water in the long run?	The Competent Authority will include a specific condition in the authorisation, that the Mine must supply any affected water users with water of similar quality or quantity. We can also include a condition in the EMPr under the section that refers to "specific conditions for inclusion in the authorisation".
Lindakhule Magogula (LM)	What is the depth of the groundwater table and the boreholes that will be affected?	Two aquifers occur within the project area, the upper weathered aquifer and the underlying fractured rock aquifer. The upper aquifer, being the one that is normally used by windmills, hand pumps etc. is at an average depth of 4.33m. A hydrocensus was completed of the surrounding farms and the depths of these boreholes were measured and recorded. According to the hydrocensus Mr. Bosman's borehole is 11.30mbgl and the Community borehole is 3.48mbgl.
Jan Venter (JV)	Has the rezoning application been submitted? And if not, will a copy be submitted to the Department of Agriculture?	No application has been submitted as of yet. If the mine does go ahead an application will be made by a Town Planner, it is presumed that a copy will be sent to the Department of Agriculture.

Jan Venter (JV)	The rezoning application should be undertaken concurrent to the application for Environmental Authorisation, as the one is reliant on the other.	No application has been submitted as of yet. This will only be submitted once a decision has been made by the Board re: the financial model and whether the mine will in fact go ahead or not.
Lindakhule Magogula (LM)	Are the socio-economic benefits worth the impact on the environment?	The social and environmental impacts have been assessed in the EIA EMP; the decision on whether the project should go ahead will ultimately lie with the Competent Authority, DMR.
Mnezi Gcina Mnisi (MGM)	Mines start up and take out resources without the community benefitting. As residents we need development and empowerment. How will local companies and entrepreneurs benefit from the project, there are numerous local companies but none are getting work from the mines. The mining charter says local businesses need to benefit. How can we be guaranteed work and where do we get the information?	Local employment and procurement forms part of the S&LP and Mining Right Application, but within the Mine's business processes. Information on procurement and employment opportunities will be made available once a decision has been made on the Mining Right and Environmental applications.
Fortune Mabizela (FM)	When will the mine be authorized, and when is construction expected?	If the board approves the financial model, then we should know around September / October as to when construction would commence. The RoD and Mining Right is however only expected early next year. It is likely that construction would only occur towards the end of 2018, early 2019.
Fortune Mabizela (FM)	Will we be notified before construction commences?	Once a record of decision is decided and authorization is granted, we will notify all I&APs of the outcome and their right to appeal.

Lindakhule Magogula (LM)	Who is the target audience for this meeting? As the meeting is being conducted in English and no translator is provided for those that do not understand English. The meeting is being held at a difficult time and location for the majority of the community to attend.	The target audience is all I&APs. It is difficult to arrange a meeting with a suitable venue and time for all parties concerned. One-on-one meetings can be arranged, and minutes can be translated.
Joseph Mtsweni (JM)	The community asks tough questions and I cannot answer them all. We need someone to come and inform them of the impacts and that their water will be affected.	A one-on-one meeting can be arranged with the community. A translator can also be arranged if need be.
Joseph Mtsweni (JM)	The local people are concerned that they will not receive any benefits and jobs once the mine commences with construction and operation. As is the case with many of the mines in the area, contractors are used on site and the labour force is bussed in from surrounding Municipalities. What about the immediately affected community? What is considered local in terms of the Social & Labour plan? Must make sure people that are living with the impacts actually benefit from the mine. Have sent through a list of projects and needs from the community to Michelle.	During procurement we look at the local communities and what skills they have and what processes need to be followed to be able to do work for the mine. Suggested that the Mine Management, S&LP consultants meet with the community to discuss the way forward and identify the potential for any training programmes prior to commencement of the mine.
Meeting adjourned.		