

# FOSTERVILLE GOLD MINE - ENVIRONMENTAL REVIEW COMMITTEE

7<sup>th</sup> February 2017

## MINUTES

<b>Tour Undertaken at 9.30am</b>
<b>Attendance:</b> Jeff Cummins Lynley Strachan (GMW) Tim Harrington Nick Tuohey (EPA) Bob Disken (EER) Grant McFarlane (EER) Barrie Winzar Cr James Williams (COGB) Shaun Breaden (EPA) Alan Read
<b>Areas visited:</b> Tour included the Mine and Surface Water Storage Area

<b>Meeting Opened at:</b> 11:00am	<b>Minutes by:</b> Trudi Jackson
<b>Attendance: Chairman :</b> Clare Fountain Nick Tuohey - EPA Shaun Breaden - EPA Jeff Cummins – Community Representative Tim Harrington – Community Representative Ian Holland – Fosterville Gold Mine (FGM) Felicia Binks – FGM Trudi Jackson – FGM Erin Simpson - FGM Joseph Hughes- FGM Grant McFarlane (EER) Lynley Strachan (GMW) Bob Disken (EER) Barrie Winzar – Community Representative Morgan James (COGB) Cr James Williams (COGB) Braden Verity – FGM Sue Mills – FGM Peter Johnson – DELWP Steve Gannon - FGM	<b>Apologies</b> Ashley Elliot – Goldfields Revegetation  <b>Observers</b> Alan Read

**Meeting Commenced:** Felicia Binks introduced Clare Fountain who will be the chair for the meeting. Felicia also explained that many ERC's are moving towards having an independent chairperson rather than have a councillor fill the role. This was confirmed by Cr Williams and Felicia advised that FGM will be looking towards appointing a permanent independent chair in the future. Clare outlined the process of how the meeting would operate and provided an opportunity for each attendee to introduce themselves.

## **Minutes of the Previous Meeting**

**Moved: Jeff Cummins**

**Seconded: Tim Harrington**

## **PROJECT UPDATES**

### **Exploration Seismic Program**

**As per presentation delivered by Braden Verity**

Ian Holland explained that the seismic program being proposed was a primary exploration tool. At Fosterville magnetics and density contrast exploration don't work and structure and stratigraphy is the main focus. This program enables better targeted drilling and the length of the survey is around 12km in order to gain the depth required. It will be short term (days only) using a truck and also some test explosives to establish the best seismic source. If the survey is successful then the plan would be to carry out a 3-D survey next year. The first mechanism for community engagement is the ERC meeting and it is hoped the survey would be carried out prior to mid-year.

Cr James Williams asked what noise would be generated. Ian said it would be a discrete noise and when it was scheduled to occur would be well communicated and made in consultation with landowners. Cr Williams asked if it would be done piece by piece. Braden replied that there would be initial access required to bury the geophones and the truck would come within the next 10 days. Cr Williams asked if it needed to be done when it was dry given winter was upon is. Barrie asked what time length it would take to process the data. Ian Holland stated it takes a lot longer to process the data and it is cutting edge technology for metalliferous mines and would be expected to take months.

Tim asked if the 12 km survey would follow the HV lines and if the survey would cross the river. Ian said it still needs to be mapped out. Tim raised concern that there were cereal crops across the river and FGM may be unable to get access at that time. Alan Read asked what would be the width of the survey to which Ian responded it would only be 1 line with some tolerance. Tim asked if the starting point would be to the West and Ian said it would be a few km south and a few km west.

Jeff raised the question would FGM need access to private property and how would this be managed. Felicia said we would require access and it would be managed on an individual basis. Bob then explained the two licences that FGM has, with one being the mining licence and the other the exploration licence. East of the river FGM has no exploration licence which also means no bond and no work plan. An exploration licence could be taken out or FGM could collaborate with Geological Survey Victoria however the results would then be made public.

Jeff asked if this would prohibit FGM from exploring? Bob said no and that it can be done but that this scenario hasn't occurred very often. Ian explained why FGM requires having such an extent of exploration in order to target the depth. Jeff asked if FGM know the potential properties that the survey will extend to and Felicia responded by saying we are not sure as HiSeis will be out this month to look at potential areas. Ian Holland added the ERC was an opportunity to start presenting the information. Jeff asked if FGM has a metric on vibration and noise which would be helpful for the community.

Felicia said FGM would provide the information Jeff requested and is aware that there are lots of authorities which need to be involved in the discussions such as DELWP, Parks Victoria etc. and the ERC was really just the start of the process. Tim said to the east he is aware of 6 to 8 properties that are cereal paddocks which will be growing and seeding during the time of the seismic survey. Felicia responded that FGM don't know if the survey needs to be completed all at once or if gaps can be filled in later, more information is needed.

Lynley asked if the seismic wave is measured or if the time is measured. Braden responded by saying they measure the reflected waves that bounce back and the time this takes which can then distinguish the rock type from that information generated. Ian said further details on technical parameters and which landholders are

impacted will become available. Jeff then asked if this will happen prior to the next ERC. Felicia said yes it may and that an information update will be provided either via post/email/hand delivered information. The ERC representatives always receive the correspondence sent to landholders. Bob added that the program is across two shires (CoGB and Campaspe) and FGM needs to be aware of this when considering community engagement. To wrap up Ian said the project is only in early engagement stage and the detail is still to come. The ERC will be kept informed.

Morgan noted that FGM would need to look into planning as well. Peter asked if any areas would be disturbed and Braden responded by saying the most impact would be a 1m pad for the truck with minimal disturbance.

### **Managed Aquifer Injection Project** **As per presentation delivered by Steve Gannon**

Nick asked a question regarding what would be the trigger at the treatment plant with regards to water contaminants. Steve answered by saying there may be a delay of hours for the trigger and stopping of the plant. Nick added that at 2ML per day, pumped at 20l/sec and a 12 hour delay would result in a lot of water and highlighted that there needed to be a better shut down mechanism. Steve said that there could be an online instrument that can shut down the plant immediately. Tim added that there is 5 to 6 km of pipe as well to consider and how would this be treated. Steve said the water in the pipe could be diverted with Ian adding this could form part of the buffer process.

Jeff said the trial extracted water and then reintroduced water, is it a confined aquifer? Steve said it will permeate at a certain rate so injection rate can't be greater than that. Jeff said he understands that but is more wanting to know about the quality of the water. How will this water quality impact the aquifer? Having the modelling upfront would be good because at the moment we are uniformed. Steve then asked, if we match the aquifer water quality then what would need to be modelled? Jeff then said his concern was around salt build up. Steve said the salt in the injected water is half of what is in the aquifer. Jeff then asked have you modelled this impact. Lynley then asked what the parameters of the trial were, to which Steve answered the max TDS was 12,000 in the aquifer and the injected water was 6,000 TDS.

Nick asked if the 20l/sec is what is assumed the aquifer can handle. Steve answered that this is not definitive. A 2M/L per day processing plant is being built. If FGM can do 2M/L per day then we may look for another aquifer to the West. The aquifer will really dictate this rate. Sue added the trial was based on 8L/sec being injected into 3 bores; this would allow 6 -7 years before any impact is seen. FGM needs to look at our operational strategy and may switch bore hole injection on or off as required to minimise risk.

Lynley stated she was surprised at the salinity of the aquifer and that the bores around this area were not that deep. Peter asked how the aquifer will behave over time and is there a point where it may have an impact on other aquifers. Steve answered by stating that the rate at which injection occurs will be important and FGM will have compliance monitoring bores so that we don't raise the hard rock aquifer into the shallower aquifer. Peter asked if it will intersect another aquifer at capacity and Lynley replied that it is confined and will only impact the lower aquifer. Barry asked would FGM have a northern monitoring bore. Tim suggested a Campaspe or Barnadown Road bore hole for monitoring. Steve said if it was needed they would have one in this area.

Tim pointed out that Aquifer Injection is leading edge technology and circuitry and really needs lots of data once you start. Initially FGM is looking at 1 M/L per day, in 12 to 15 months down the track will it be 3M/L per day? Ian responded by saying that over time the rate should be pretty similar to the 1.2M/L per day. Governing this is the rate of vertical extent of the mine and nothing we see at present will change that rate. Trying to reach a steady state will be a slow permeation.

Tim added that independent sampling and monitoring would be reassuring for the community and parallel results would give more credit to the company. Lynley said that this could be a possibility and can be discussed with GMW. Tim asked will increased rainfall events have any impact given the data from the previous 10 years indicates that this has been occurring more often. Sue responded by saying this will be a part of the hydro modelling. Tim mentioned that some land owners have bores in Axedale now and asked if there needs to be

monitoring to the south as well. Felicia replied by saying there are CIL heaps in that area so we do already have monitoring bores in place.

### **Air Quality**

#### **As per presentation delivered by Joseph Hughes**

Nick asked how long the chemical dust suppression material would last. Joe said we will know more after the trial but it is expected to be around 12 months. Tim said he has noticed less dust from the CIL heaps but what were the properties of the product on dilution? Joe said the MDS sheet state the material is non toxic. Jeff said he was delighted to hear there is some progress on the continuous dust monitoring however it doesn't satisfy the report in relation to compliance to the consultant's recommendations. The mine doesn't monitor frequently enough and over the last 12 months the data is scant and FGM hasn't advanced at all. Jeff also stated given the Hi Vol monitor is going to be installed to the south he questions the reliability of the data from the airport and the has raised this before. Joe replied that FGM are looking at having wind sensors at this location and data extracted from 3 additional ones already in place at FGM.

Jeff stated that this may reveal the prevailing wind may be different and Joe stated the wind direction is key. Jeff said the FGM haven't progressed at all and the regulators need to take note. Nick said timeframes have now been discussed at this and the last meeting, when will it happen. Grant said he would like to look at a summary of what actions had been taken up on and what has not.

Ian Holland explained that we engage consultants for their expertise and are complementary to site knowledge. They are only here for a short term so there can be some conflict with the depth of knowledge. Their short term engagement has some limitations and it is a voluntary arrangement the company has undertaken. FGM takes on board the recommendations but only implement those that are beneficial to site.

Jeff replied by saying that's fine and it can be debated but the consultant said there are major issues with ambient air which is a regulation for the mine. It is a key health issue. The consultant has said FGM don't have enough monitoring and it needs to increase so you have proper baseline data. FGM has had breaches of PMs in the past and nearly had one recently. It is a compliance issue and FGM needs to advance as it is a legal obligation. Grant said these decisions were made in Melbourne and he wait for more detail before providing comment.

### **OPERATIONS REPORT**

#### **(As per Operations Report issued to members)**

### **Safety**

As per the report

Discussions

Bob asked if work safe is made aware of incidents to which Ian responded yes.

### **Environment Report**

As per report and presentation

### **Discussions**

Tim asked why did FGM do a river survey? Felicia said it is to fill an information gap as it hasn't been done since 2012. Tim then asked what locations are chosen. Felicia said there were 5 sites from Axedale to the Barnadown Bridge. Tim asked what type of sites are chosen with Felicia adding they were at Axedale just before the bridge, on private property and at the Barnadown Bridge. Ian Holland said part of the motivation for the survey is that the operation has been moving to the south. Barrie then asked if FGM surveyed just after the Axe Creek and Erin

confirmed that this was done. Felicia added that more will be done by FGM later in the year to engage a community group to help improve Axe Creek.

Grant asked with regards to the mining licence application if it was mostly crown land. Felicia said some was crown land and some was FGM's land and we are seeking advice from Morgan regarding planning permits.

Bob enquired about progress from the FW03 overtopping incident. Felicia said earthworks had been done. FGM are waiting on data from the hydro modelling to determine the need for a permanent overflow pipe. Bob added that the incident was referred to an investigator in Melbourne who came to site. This was the second time it had overtopped and that was why it was investigated. Jeff asked when will we know the outcome of the investigation with Grant stating that ERR will write to the company once finalised. Bob said the company is looking into a solution as the dam is not meant to overtop. Felicia added that overtopping to the diversion drain is not allowed and the company does have a lot of management strategies for the dam.

#### Water Quality

As per report and presentation

Jeff stated that FWR20 results seem to be going southward. Erin said that in January the level was above 6 and Jeff asked if she had any ideas why it went under 6? Erin stated the dip in results seemed to correlate with the heavy rainfall events. The monitoring was increased to monthly as a management strategy and noted that all water was contained onsite and doesn't overflow.

Bob then said that BGL59 is right on the licence boundary near the river and would encourage FGM to look at this bore given the arsenic readings. Felicia stated that the levels were not moving with the Pit. Lynley asked what was the date of the lowest point in the bore and Erin said it was July. Lynley stated the river levels were low at that time.

Jeff asked if the cyanide levels in ODwyer North Pit could be related to the 7<sup>th</sup> of October incident. Felicia said no as the cyanide wouldn't hang around that long. Jeff then noted it was important that it had recovered since as shown in the last result.

Felicia also noted and apologised that there were 7 excursions arsenic at MBOS07 at RSF3 not 4 as was indicated in the report.

Tim then commented that the remedial work south of O'Dwyers for the low lying water helped but FGM could do a lot more.

#### Air Quality

As per report and presentation

Jeff noted that PM10 – Hi Vol graphs were not included in the report and that FGM needs to watch results as they are near exceedance.

#### Noise

As per report and presentation

Nick asked what the follow up for FGM'S noise breach was. Jeff also commented that it was a significant exceedance and wanted to know what were noises associated with SON – sounds of the night. Felicia said SON were basically insects and cicadas. Grant responded to by saying the code for noise monitoring is subjective and ERR is looking at enforcing 24/7 logging and is currently in discussions about this. Ian stated this has been done in the past. Jeff said that logging data is okay but not on its own, it needs to be accompanied by a recording. Nick stated that a logger gives a better amount of data.

### **Community**

As per the report and presentation

Tim added that the Axedale Golf Day was a great day

### **Production Update**

As per the report

### **Exploration**

As per the report

### **Personnel**

As per the report

### **Rehabilitation Report**

As per the report

## **OTHER BUSINESS**

### **Gunya Creek**

Nick provided an update on Gunya Creek and said the EPA received all the results and didn't have any concerns for elevated As in the area. There was some concern about the operations that happened with the mine and the landholder putting the material into a burrow which may be permeable and have the potential to leak into the dam. He noted the mine needs to monitor this. He also said the EPA followed up with the landholder and they were happy with the service from FGM. There was no indication that the As has come from the mine, some of the background readings were elevated but the only concern was that the sediment was buried. Ian Holland then stated that this is what the landholder wanted and Felicia added that FGM are still monitoring by sampling the area.

### **ERC Reform**

Bob gave an update on ERC reform stating that a number of reviews had occurred over 5 years under various ministers. There was still work to be done and some of the findings are to move towards an independent chair rather than having councillors fill the role. Jeff said this was disappointing but he had recent correspondence with council to ask if they will still facilitate the ERC election process. Cr Williams said the council will support an independent chair and also facilitate the election of its community representatives.

### **Other**

Nick introduced Shaun who will be replacing Paul Ratajczyk at the EPA.

Tim then noted he wanted to talk to FGM about the historical tailings to the North and their remediation and also was there any updates on the remedial work in Axedale. Felicia said she had just received an email and planting was scheduled for June/July. So Tim summarised by saying it was a work in progress.

**Meeting Closed:** 1-40pm

### **Next Meeting: TBA**

Meeting Dates for 2017- 2<sup>nd</sup> May, 1<sup>st</sup> August, 8<sup>th</sup> November.