

## Latrobe Valley Mine Rehabilitation Advisory Committee

Meeting 03 Minutes *(with confidential information redacted)*

### MEETING #03 MINUTES

THURSDAY 8 JUNE 2017

YALLOURN MINE, EASTERN ROAD, YALLOURN VIC 3825

#### ATTENDEES

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**Susan Lloyd (Chairperson)**, Latrobe Valley Community

**Roland Davies**, Latrobe Valley Community

**James Faithful**, Latrobe Valley Mine Operators (ENGIE Hazelwood)

**Sarah Gilbert**, Latrobe Valley Mine Operators (AGL Loy Yang)

**Ron Mether**, Latrobe Valley Mine Operators (EnergyAustralia Yallourn)

**Graeme Middlemiss**, Latrobe City Council (Councillor)

**Phil Stone**, Latrobe City Council (Council Officer)

**Nicole Griffin**, Gippsland Water

**Terry Flynn**, Southern Rural Water

**Joanne Brunt**, Aboriginal Community representative

**Grace Mitchell**, Department of Environment, Land, Water and Planning (DELWP)

**Brett Millsom (Secretariat)**, Department of Economic Development, Jobs, Transport and Resources (DEDJTR)

#### APOLOGIES

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**Luke Wilson**, Department of Economic Development, Jobs, Transport and Resources (DEDJTR)

**Jane Burton**, Department of Economic Development, Jobs, Transport and Resources (DEDJTR)

**Alan Freitag**, Department of Environment, Land, Water and Planning (DELWP)

**Tim Delany**, Gippsland Trades and Labour Council

#### GUESTS

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**John Krbaleski**, Executive Director, Low Emission Resources, Department of Economic Development, Jobs, Transport and Resources (DEDJTR)

**Ann Kirwan**, Program Manager Land Use Strategy, Department of Environment, Land, Water and Planning (DELWP)

**Anthony Feigl**, Senior Project Manager, Latrobe Valley Regional Rehabilitation Strategy, Department of Economic Development, Jobs, Transport and Resources (DEDJTR)

## Latrobe Valley Mine Rehabilitation Advisory Committee

Meeting 03 Minutes *(with confidential information redacted)*

Agenda Item	Minutes
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**1 Introduction from the Chair and Committee administration**

- Minutes from the previous meeting of the Committee (Meeting #02) were noted by the Chairperson.
- Apologies for Luke Wilson, Jane Burton, Alan Freitag and Tim Delany were noted by the Chairperson.

**2 Presentation on key components of batter stability in mine rehabilitation**

*Delivered by: James Faithful, Technical Services Manager, ENGIE Hazelwood*

The presentation provided Committee members with an overview of some of the key components that contribute to batter stability in mine rehabilitation.

- The outcome for all mine rehabilitation is to achieve a 'safe', 'stable' and 'sustainable' landform.
- Brown coal mines need to be treated differently to black coal mines.
- In black coal mines the stripping ratio is approximately 1:5, that is, for every volume of resource that is extracted, five times the volume of that resource of overburden is required to be removed.
- Brown coal in the Latrobe Valley has a stripping ratio of approximately 5:1.
- For an operating batter, movement has been detected to occur up to 400 metres beyond the mine crest.
- There are two key components to mine stability:
  - batter (or mine wall stability); and
  - mine floor stability.
- The aquifer beneath the floor of the mine can exert significant upward pressure on the mine floor. Depressurisation of the aquifer is required to manage this.
- It was asked where the water removed as a result of depressurisation goes. James Faithful advised that this goes into the cooling pond.
- It was noted that Yallourn does significantly less depressurisation in comparison to Hazelwood.
- 'Factor of Safety' describes the ratio of resistance force to the disturbing force.
- ENGIE has set a Factor of Safety target of 1.5 for final rehabilitated batters. That is 50 per cent greater pressure pushing mine blocks into place than the pressure being exerted in pushing mine blocks outward.
- It was noted that the higher the final pit lake level, the greater the long term stability of the rehabilitated mine.
- Clarification was sought regarding the advantages of filling the mine quickly from an overall, final landform stability perspective. James Faithful advised that the sooner you are able to get to the end point the better from an overall stability perspective, in particular, a point where the water enters the mine at a rate that outpaces the rise of the water level within the batter.
- It was asked whether or not water would be sucked into or absorbed by the M1 clay and whether or not this could increase the risk or likelihood of land slippages? James Faithful noted that ENGIE's modelling assumes that the M1 clay will be wet.
- If 700 litres per second is being pumped out to maintain floor stability, is 1400 litres of water the assumed fill rate required for rehabilitation purposes? James Faithful noted that the assumed fill rate is greater than this, and that with the modelled fill rate, the Hazelwood Mine can be filled within 12-15 years.
- It was asked whether or not ENGIE's modelling takes into account the likelihood of earthquakes? James Faithful advised that this has been considered. It was also noted that Loy Yang did some testing a few years ago as to whether or not brown coal absorbs or amplifies earthquakes. The research found that brown coal actually absorbs earthquakes.
- It was asked how the timelines associated with filling the mines in the Latrobe Valley compared to the German experience i.e. is a 12-14 year fill time considered fast or slow? James Faithful noted that the estimated fill rate is very much an ideal fill time.

**3 Overview of geographic scope of the Latrobe Valley Regional Rehabilitation Strategy (LVRRS)**

*Delivered by: Anthony Feigl, Senior Project Manager, LVRRS, DEDJTR.*

Committee members were provided with an extract of the LVRRS Project Plan providing further detail about the geographic scope of the LVRRS Project.

## Latrobe Valley Mine Rehabilitation Advisory Committee

Meeting 03 Minutes *(with confidential information redacted)*

- The reopened Hazelwood Mine Fire Inquiry found that there are a number of knowledge gaps regarding the pit lake rehabilitation at both the mine and regional scales.
- The Latrobe Valley mine operators committed to addressing mine scale issues through the development of a 10 year integrated research plan identifying common research areas and issues across each of the three mines. This delivers on recommendation 18 of Volume IV of the *Hazelwood Mine Inquiry: 2015/16 Report*.
- The Victorian Government committed to addressing regional scale issues through the preparation of the LVRRS.
- There are three spatial scales being used for LVRRS technical investigations:
  - mine/pit lake scale;
  - inter-mine scale; and
  - catchment scale.
- The **mine/pit-lake scale** is defined as the area within the mining licence boundary for each of the three Latrobe Valley coal mines.
- The **inter-mine scale** takes into account all three of the Latrobe Valley coal mines and incorporates the physical interconnection between them.
- The **catchment scale** is defined as the hydrological catchment of the Latrobe Valley, including the groundwater and surface water catchments inclusive of the Latrobe River and its tributaries.
- The need for all spatial scales and regional receptor studies to consider cultural heritage and potential impacts on sacred Aboriginal sites was noted. At the mine scale, this is something that has been taken into account through Native Title Agreements, however there isn't a mechanism that currently exists for this to be considered on a broader scale.
- Clarification was sought regarding how water quality issues were being addressed. Grace Mitchell noted that water quality issues, including issues of public access, will be considered at all three scales being considered as part of the LVRRS.
- It was asked if opportunities that may be associated with the final landform should be considered as a regional receptor. Anthony Feigl advised that this will be considered as part of the LVRRS.
- It was noted that the quicker answers can be arrived at, the better, without compromising on the technical rigor of the studies to be undertaken. This will help in resolving open-ended questions currently being asked within the community about the final land use.
- It was asked whether it can be assumed that the water quality will be sufficient to allow for a level of public access. James Faithful noted that ENGIE is undertaking scenario modelling looking at water quality in the rehabilitated Hazelwood Mine under a range of scenarios. Ron Methner noted there are some positive outcomes that could potentially be achieved as a result of mine rehabilitation. Information gathered to date at Yallourn indicates a positive water quality if it is to connect into existing water bodies.
- It was noted that government is being very open about specific end land uses. It's important to note that no decision has been made as yet on the final end land use.
- It was noted that there is a community expectation that designs and plans will be finalised within the short to medium term. The community will not tolerate being told that it will take between 10 and 15 years to finalise rehabilitation plans. The quicker the final models and plans can be developed and shared, the quicker the community is able to comprehend and understand them.
- It was noted that for discussions with the community it's less about water quality in terms of factors like Total Dissolved Solids (TDS), etc. Community members are more interested in the potential uses of a water body. For example, is it something you can fish on? Is it something you can waterski on? There is a need to focus on language that the community can understand.
- It was noted there is an opportunity for ENGIE to discuss and put forward some of its individual land use options at its meeting on 14<sup>th</sup> June 2017. For government, there's an opportunity to have those discussions through the Latrobe Valley Mine Rehabilitation Commissioner

4

### Presentation on land use planning component of Latrobe Valley Regional Rehabilitation Strategy

*Delivered by: Ann Kirwan, Program Manager, Land Use Strategy, DELWP*

The presentation provided Committee members with an overview of the land use planning workstream of the LVRRS.

- The Latrobe Valley Land Use Strategy needs to integrate with the work being undertaken as part of the LVRRS.
- Issues and questions regarding water and land stability associated with the pit lake rehabilitation option need to be resolved before a final land use outcome can be identified, however that doesn't stop government from working with the community

## Latrobe Valley Mine Rehabilitation Advisory Committee

Meeting 03 Minutes *(with confidential information redacted)*

and other key stakeholders to determine the preferred end land use for the mine voids.

- The Latrobe Valley Land Use Strategy needs to be mindful of existing, permitted land uses within overlays and buffer zones in the region.
- It was noted that land to the west of the Loy Yang Mine has been locked up under a protection overlay for some time.
- Ann Kirwan advised Committee members that there would need to be robust, strategic justification to amend existing coal protection overlays and provisions.
- It was noted that the Latrobe City Council would like to see more flexible provisions adopted for coal Area H while at the same time preserving the optionality of the resource as they express coal policy. It was also noted that there is a desire for recreational uses associated with the pit lakes if these are achieved
- Ann Kirwan noted the importance of the LVRRS sensitive receptor and cumulative impact analysis in helping to determine potential land uses.
- It was noted by Council representatives that there is considerable community pressure to alter the proposed Traralgon bypass route and that there have previously been promises made to assist Latrobe City Council in simplifying overlays.
- Ann Kirwan noted that the Latrobe Valley is being treated as a pilot for smart planning system improvements.
- Questions whether the \$110 million plantation for the Latrobe Valley committed to by the Victorian Government in the 2017/18 Budget (and the associated fire risk) are being monitored for land use implications. The Latrobe Valley Land Use Strategy will consider the spatial implications of the plantation committed to by the Victorian Government in the most recent State Budget. Ann Kirwan advised that she is working closely with agriculture colleagues as part of Land Use Strategy preparation and their implementation of the Government's support for a new plantation. If there are hazard or risk points from a spatial analysis perspective associated with the proposed plantation location, she will be in a position to advise accordingly.
- As part of Latrobe Valley Land Use Strategy, workshops and conversations will occur with key stakeholders, including Latrobe City Council and the community about beneficial end uses.

### 5 Presentation on Latrobe Valley Regional Water study

*Delivered by: Grace Mitchell, Director Water Resource Assessment, DELWP*

The presentation provided Committee members with an overview of the Latrobe Valley Regional Water Study being undertaken as part of the preparation of the LVRRS.

- The Hazelwood Mine Fire Inquiry noted that there are a range of questions associated with the pit lake rehabilitation option regarding water quality, water sourcing, downstream impacts, etc.
- Most of the Gippsland Lakes region's water used for irrigation purposes occurs in the Macalister Irrigation District with water drawn from Lake Glenmaggie on the Macalister River. This river feeds into the Gippsland Lakes.
- Agriculture is not a big user of water in the Latrobe River Catchment. Most agricultural water uses are rain-fed.
- The Latrobe River Catchment's biggest water users are industrial users.
- The Victorian Government considers the 'environment' as a water user.
- The *Gippsland Region Sustainable Water Strategy* noted a small amount of unallocated water within the region, however this is now a drought reserve.
- The LVRRS will consider the implications of changing the amount of flow and availability within the water system and what the impacts of this will be.
- It was noted that each mine is in a unique hydrogeological circumstance.
- Each of the Latrobe Valley mines is required to de-water to keep them dry.
- It was also noted that the mines are hydrogeologically interconnected so how you fill one may have impacts or implications for filling options for the other two mines.
- It was asked if the Latrobe Valley Regional Water Study will look at the impacts of de-watering in Bass Strait. Grace Mitchell advised that the study won't specifically look at this however it is aware of this.
- As part of the delivery of the Implementation Plan actions, DELWP will soon have a good overview of the regional water situation.
- It was noted that the geographic scope of the Latrobe Valley Regional Water Study covers the whole Latrobe River Catchment and considers the Gippsland Lakes as a receiving water.
- It was also noted that an overlay of the groundwater basin relevant to the LVRRS project doesn't neatly align with an overlay of the surface water basin.

## Latrobe Valley Mine Rehabilitation Advisory Committee

Meeting 03 Minutes (with confidential information redacted)

- The *Hazelwood Mine Fire Inquiry: Victorian Government Implementation Plan June 2016* lists the studies being undertaken as part of the Latrobe Valley Regional Water Study.
- The Hazelwood Mine Fire Inquiry raised the issue of rights to water. DELWP is currently considering water entitlements and rights held by the Latrobe Valley coal mines and whether or not these can be used for rehabilitation purposes.
- It was asked if water entitlements are purchased and allocated much like a farmer would to hold water in dams. It was noted how water entitlements and allocations are awarded is complex and warrants potential further explanation at a future meeting.
- It was noted that allocations and entitlements for each of the mines and power stations are slightly different. For example Loy Yang A holds a bulk entitlement while Loy Yang B holds a diversion licence.
- There have been instances in the past where there was a water shortage (late 1990s) and the power stations had to go to market to purchase water.
- It was noted that the LVRRS project team is aware that there is a tension between the community wanting to know the answers to the questions that it has and the time taken to complete the studies to ensure that we have answers to the questions that are backed by sound and robust science.
- As part of DELWP's actions in response to Hazelwood Mine Fire Inquiry findings, work will also be commissioned looking at impacts of climate change on water availability.

### 6 Round-the-table updates

#### Ron Mether, Latrobe Valley mine operators (EnergyAustralia Yallourn)

- The Batter Stability Project is now complete.
- Yallourn has wrapped up rehabilitation for the autumn season and is currently doing forward research planning.

#### Roland Davies, Latrobe Valley community

- Second Gippsland Regional Assembly on 16<sup>th</sup> August 2017.
- Roland Davies previously presented to the Victorian Government's Economic Development Forum regarding the economic value of the Latrobe Valley's coal resource and is happy to present to this Committee if it wishes.

#### Nicole Griffin, Gippsland Water

- Gippsland Water has recently completed its *Urban Water Strategy* and provided to the Minister for Water.

#### Terry Flynn, Southern Rural Water

- Southern Rural Water has recently met with Baw Baw, Wellington and Latrobe City Councils to talk about development of a new irrigation system out of the Latrobe system.
- Attended Federation University's Geotechnical and Hydrogeological Engineering Research Group's *Geoengineering of Brown Coal* workshop earlier in the week (Tuesday 6<sup>th</sup> June 2017). One session in particular highlighted the uncertainty regarding the questions relating to water for mine rehabilitation.

#### Phil Stone, Latrobe City Council (Council Officer)

- At the 29<sup>th</sup> May 2017 Council Meeting, Council resolved a position statement on coal. Broadly speaking, Council's position is that it would still like to see some coal mining activity take place in the region.

#### James Faithful, Latrobe Valley mine operators (ENGIE)

- ENGIE Hazelwood hosting community information meeting at the Italian Australian Club in Morwell on 14<sup>th</sup> June at 5:30PM.

#### Sarah Gilbert, Latrobe Valley mine operators (AGL Loy Yang)

- Work continuing on the Loy Yang western batter rehabilitation trial.

#### Susan Lloyd (Chairperson), Latrobe Valley community

- Recently met with Latrobe Valley Authority Chief Executive Officer Karen Cain and Director of Economic Development, Mike Timpano. As an outcome of that meeting, a briefing pack providing an overview of the Committee is to be provided to the Latrobe Valley Authority.

#### John Krbaleski, Executive Director, Low Emission Resources, DEDJTR (observer)

## Latrobe Valley Mine Rehabilitation Advisory Committee

Meeting 03 Minutes *(with confidential information redacted)*

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- The Victorian Government has completed review of rehabilitation bonds and will be writing to the mine operators regarding the outcome of that review and what that means for existing bonds.
  - It was noted that the Victorian Government has prepared a statement on brown coal which will be released shortly.
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### 7 Other business and next meeting

Next meeting to be held on Thursday 10 August 2017 at Loy Yang.

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