Hunter Environment Lobby Inc.

PO Box 188
East Maitland NSW 2323
4th July 2018

MT PLEASANT COAL MINE MODIFICATION 3
IPCN - HEL Objection

Hunter Environment Lobby (HEL) is a regional community-based environmental organization that has been active for well over twenty years on the issues of environmental degradation, species and habitat loss, the importance of biodiversity and the challenges of climate change.

HEL has particular interest in water management issues in the Hunter Region and has held positions on the Hunter River Management Committee during the development of the water sharing plan for the Hunter Regulated River Water Source.

HEL has also been selected by agencies to serve on the Hunter and Paterson Environmental Water Advisory Group as well as having served on on the Upper Hunter Air Quality Monitoring Network Advisory Committee.

HEL has had a long interest in the environmental health of the Hunter River system and is of the opinion that water quality is a significant issue for river health in the Hunter Region.

HEL is concerned that the large proposed greenfield mines and mine expansions to the west of the Hunter River, particularly within the Goulburn River tributary (eg Bylong Mine) and in the upper sector (eg Muswellbrook West, Dartbrook opencut, Mt Pleasant) will place additional pressures on the river system and cause further degradation of river health.

HEL is concerned that there has been no rigorous assessment of cumulative impact of mining on the Hunter River system.

The Hunter bioregional assessment conducted by the Federal Independent Expert Scientific Committee was released in early June. It found that the cumulative impact of mining on water sources is potentially significant.

The Muswellbrook area has been identified as one of the impacted places in the Hunter with the potential for hydrological change.

The advice is that Governments, industry and the community should focus on the areas that are potentially impacted and apply local-scale modelling when making regulatory, water management and planning decisions.

We call on the Commission to closely consider the cumulative impacts of this proposal on the health of the Hunter River.

In our submission to the DPE last year, HEL outlined our belief that this application is not a simple extension of life of an existing mine. Since this project was assessed and approved in 1999, the surrounding area has changed substantially with the opening of the Mangoola mine and the construction and expansion of Bengalla mine and several expansions of Mount Arthur mine.

The Mt Pleasant operation is now a new cumulative mining impact and should be reassessed as a new mining proposal taking into account all the current environmental impacts of the large mining operations surrounding Muswellbrook and the Hunter River.

Water Sources

The key concern we are addressing today is the impact of this proposal on water sources. We have considered the DPE Environment Assessment Report, the Environmental Impact Statement Main Report, the Mt Pleasant Water Management Plan as approved by DPE in March 2018 and various documents associated with the 1999 approvals process.

We will be covering the following issues in summary in this presentation and providing more detail in our written submission:

1. Inadequacy of DPE assessment of water impacts
2. Inadequacy of Mt Pleasant Water Management Plan
3. Lack of information about groundwater impacts and final void
4. Lack of detail about discharges under the Hunter River Salinity Trading Scheme DPE assessment report

1. Poor DPE assessment

The report provided to Commissioners concentrates on the issue of interaction of surface water management with the Bengalla Mine operation. This appears to be fraught with complication and lack of certainty, with Bengalla's active operations now directly below Mt Pleasant dams in the Dry Creek catchment. The approved construction of the Mt Pleasant discharge dam is on the Bengalla mining lease.

The Mine Water Dam and another storage known as ED 3 are near the boundary with Bengalla and could overflow, causing operational and pollution problems.

The management of this risk is proposed through storages constructed to manage a 1 in 100 year flood event. If this fails, it is proposed that water would be pumped into Mt Pleasant active mining pit or around in circles.

The risk management identified in the DPE report does not make a lot of sense, particularly if a flood event is more severe than a 1 in 100 hundred year average occurrence interval. We have experienced quite a few rain events in the Hunter Region that are greater than this and the onset of climate change will only increase rainfall intensity.

DPE has resolved this issue by referring to the commercial agreement between MACH and Bengalla. However, this does not take into account the possible environmental consequences of too much water on both mine sites.

We have seen dam collapses at other mines eg Wambo that have caused direct pollution events into the Hunter River.

The whole issue of onsite water management needs to be redesigned before a determination of this proposal can be made. This issue alone is a strong argument for an entirely new assessment process rather than this very poor attempt to assess a major new mine proposal as a modification of an ancient approval.

The DPE assessment report also considers water supply to the mine without a great deal of detail, only to conclude that all necessary licences must be in place before water can be extracted from the Hunter River.

The Water Management Plan indicates that the mine has an annual water demand of 3,940 ML/year. Currently held surface water licences total 3,345 ML but only 717 of these are high security. The total storage capacity on site is 2,481.5 ML.

While there are vague suggestions that Mt Pleasant could perhaps get water from other nearby mines, there is no certainty that water demand will be met.

The DPE assessment report also vaguely considers the issue of discharges into the Hunter River. The issue of unauthorized overflow from water storages is again to be solved by pumping water into the mine pit thus disturbing operations.

We have seen in the past when major rainfall events interrupt mining operations that the EPLs are turned off and uncontrolled discharge into river systems occur for many months afterwards. This occurred in the Goulburn River in 2010 for a period of six months. River health is sacrificed once a mine is approved on incorrect predictions and poor assessment of onsite storage capacity.

We are greatly concerned that modelling for the capacity of the Fines Emplacement Area, which is the largest source of onsite water in the water balance and the largest source of potential pollution, is based on 121 years of historic rainfall data. Nowhere in the assessment are climate change predictions taken into account.

The EPA issues with sediment dams, EPLs and discharges into the Hunter River have not been adequately addressed.

The Water Management Plan states that the adopted design standard does not provide 100% containment for runoff from disturbed areas. Hence, it is possible and expected that overflows will occur from sediment dams if rainfall exceeds the design standard.

The reference to dam construction using DoI Water's 'Blue Book' raises some concern because of the blowouts of these structures in severe storm events on other mine sites, such as at the Wambo Mine in early 2016.

DPE concludes that the Deed of Agreement between the two mines will sort out all the water management problems. We do not agree and consider there is a high level of uncertainty with this project about potential pollution incidents into the future.

The onsite water management issue has not been adequately addressed.

A major issue with the DPE assessment report is that it totally fails to address the issue of Groundwater impacts. No consideration or recommendations have been provided to the Commission on this important environmental issue.

2. Inadequacy of Mt Pleasant Water Management Plan

Before addressing the very serious issue of groundwater impacts, I will briefly comment on the Water Management Plan approved by DPE earlier this year.

We note that notification of the approved document was signed off by Howard Reed on 16 March 2018.

It is obvious that not many people have actually read the plan. There are typos eg on page 3 the plan states that this version was prepared to allow for construction and operation at Mt Pleasant and was approved on 3 August 2018.

Table 5 on page 9 showing water access licences from surface water sources has a repeat of the High Security licences. This incorrect table is used in various places throughout the document.

There are various other problems with this document that do not instill confidence that issues left to post approval management plans will be dealt with effectively.

We note that DPE recommend that if this 'so called' modification is approved the Water Management Plan would need to be revised.

We recommend that the Commission look very closely at the current plan, as approved, before making a final determination on this proposal.

The lack of a current groundwater model tests the credibility of the site water balance as provided in the plan.

3. Groundwater Impacts

We are very concerned that there is very little contemporary information or prediction on groundwater impacts provided in any documents relating to this proposal.

There is no reference to groundwater at all in the DPE assessment report. The Water Management Plan refers to the development of a contemporary groundwater model.

This cannot be developed until the final landform review is complete. This review was apparently still under consideration at the time of completing the Water Management Plan.

We currently don't know what the groundwater inflows to the pit will be, what the long term drawdown of the final void will be, what the actual interaction between the alluvial system and the mine will be, what the predicted impact on private bores will be, in fact, there is very little information about groundwater impacts.

What we do know from a desk top study conducted in 2016 is that past predictions were an inflow of 400 ML/year with an alluvial groundwater take of 60ML/year. Mt Pleasant currently holds 468 shares in alluvial groundwater access licences.

However, there is no indication anywhere whether this is to service extraction bores for water supply or to offset longterm drawdown. There is no discussion of the volume of licenced entitlement needed to be retired at the end of mining to achieve this offset.

Mt Pleasant currently holds no water access licences from the Sydney Basin – North Coast Groundwater Source, although the Water Management Plan indicates they are in the process of acquiring licences. Until the new groundwater model is complete there is no clear indication of the volume of water needed.

Some of the issues identified in the Water Management Plan are that high pressure in the deeper hard rock acquifers drives groundwater to the alluvial system and the Hunter River. The drawdown caused by mining will reverse this flow.

The issue of loss of baseflow or actual increase of Hunter River surface flows into the alluvials and into the mine is being dealt with in the new contemporary modelling.

We are concerned that when the region is in severe drought and general security allocations are nil, as in 2007, low releases from Glenbawn Dam will be impacted throughout the system through drawdown into multiple mining operations.

It is evident that Mt Pleasant will be one of the operations causing a loss to base flows. The cumulative impact of this additional loss has not been identified or assessed.

There is minimal information about the impact of the proposed final void or voids on this mine site. The submission presented to the Commission of Inquiry into the original approval of the Mt Pleasant project predicted that subsurface seepage from beneath reject impoundments will flow into voids for more than 80 years. However, there is no on long term regional groundwater drawdown.

HEL strongly objects to the retension of final voids in the Hunter landscape. There are already too many approved with no assessment of the long term cumulative toxic legacy that will impact on future land use opportunities.

We strongly recommend that no final void be approved for this 'so called' modification.

We have serious concerns about the assessment and risk management proposals relating to groundwater quality. We will be providing more detail on this issue in our written submission.

We also consider that the proposal has not been adequately assessed against the requirements of the NSW Aquifer Interference Policy.

4. Hunter Salinity Trading Scheme

Finally, on the issue of water source impacts HEL has serious concerns about the position of this operation in regard to the function of the Hunter Salinity Trading Scheme.

Again, the information about water discharge requirements is very limited. The Water Management Plan identifies that Mt Pleasant currently holds 15 credits under the scheme. The Site Water Balance predicts an annual outflow of 173 ML attributed to discharged into the Hunter River. There is no indication whether this volume will be covered by 15 credits.

It is imperative that Mt Pleasant can demonstrate capacity to acquire more credits in a timely manner before this proposal can be determined.

The Water Management Plan indicates that additional credits may be needed to allow controlled discharge from sediment dams.

HEL has many concerns about the capacity of the Scheme to adequately manage pollution from mine water discharges. The review held into the Scheme in 2014 was accompanied by a report developed by the Office of Environment and Heritage. This report identified that:

- there is inadequate sampling and monitoring of groundwater to be able to conclude that salinity has not been rising. This is of particular concern in relation to base flows to the river system.
- Salinity is an important factor affecting stream macroinvertebrate communities. A relatively high number of samples in the Hunter Regulated Alluvial Zone were found macroinvertebrate 'health' to be in a significantly impaired condition.
- The effects of differing ionic composition (eg high levels of bicarbonate) or other contaminants (eg metals/metalloids) that may be in water discharges from mines and power stations are not being measured. The issue of cumulative increase of heavy metals within the catchment system has not been addressed.

HEL considers these water quality issues to be extremely important. The cumulative impact of deteriorating water quality through mine water discharge plus the acknowledged potential for hydrological change in this section of the Hunter River should be ringing alarm bells for decision-makers.

Conclusion

HEL strongly disagrees with the conclusion provided in the Main Report of the environmental assessment that '*The Modification would not result in a material change to the groundwater and surface water impacts of the approved Mount Pleasant Operation*'.[1]

There has been no assessment of cumulative impact on surface water, groundwater or water quality of the Hunter River.

This proposal should not be approved.

Yours sincerely

[redacted]

Jan Davis
President Hunter Environment Lobby Inc.

[1] Mach Energy, 2017 Mt Pleasant Operation Mine Optimisation Modification. Main Report Table 15 p90