

NPA MACARTHUR SUBMISSION TO THE INDEPENDENT EXPERT PANEL FOR MINING IN THE CATCHMENTS

Introduction

NPA Macarthur have a history of involvement with mining in the Special Areas which goes back 18 years –

2001 - participation in the COI for Dendrobium mine

2002 to end of 2015 – representation on Dendrobium CCC

2007 – participation in Southern Coalfield Inquiry (SCI)

2009 – participation in Metropolitan mine PAC

2010 - participation in Bulli Seam PAC

2015 – participation in Russell Vale PAC

... as well as countless submissions and published articles

Through the author's involvement with the Dendrobium CCC, we have had 10 years (2005-2015) of experience of observing first-hand the ongoing impacts of mining in the Metropolitan Special Area. Via independent inspections we have also seen the damage wrought by mining on Waratah Rivulet from 2006 onwards in the Woronora Special Area.

After all this time we feel nothing but frustration with the fact that the very obvious continuing damage to the catchments has not led to any meaningful change in government policy re mining in those areas.

We had great hopes for change with the SCI in 2007. Its recommendations, more than 10 years ago, were for many of the things this Panel is still being asked to advise upon – better monitoring, assessment of surface water flows and impacts etc. It was acknowledged then that so much was unknown, particularly about the hydrology of the catchments and so much more research was necessary ... and now we are still asking the same questions after 10 years of mining has continued to degrade the catchments and there is no end in sight – to the research, the inquiries or the mining.

It seems the wheels grind very slowly, particularly as economics get in the way where mining is involved. We were thrilled with the 2010 Bulli Seam PAC conclusion –

The Panel is of the view that it is no longer a viable proposition for mining to cause more than negligible damage to pristine or near-pristine waterways in drinking water catchments or where these waterways are elements of significant conservation areas or significant river systems.

This level of damage would not be acceptable in any other assessment of water resource use

The analysis reported in Chapter 17 shows that the benefits of protecting significant natural features in the eastern and southern areas are likely to be of a similar magnitude to the mining profits that would have to be given up to ensure that protection. So while protection of the significant natural features would involve lower mine profitability, it is likely that society as a whole would gain more from the environmental protection recommended than it would lose in terms of foregone profits.

This landmark statement resulted in BHP withdrawing the proposal's entire eastern and southern domains, encompassing the headwaters of the Georges River. Most of this area, outside of drinking water catchments, subsequently was declared the Dharawal National Park in 2012.

Despite our euphoria with this result, we always had an ominous feeling of foreboding that it would result in a trade-off with BHP and this indeed came to pass in 2013 with the approval of the Dendrobium 3Ba area - albeit only the first 5 longwalls to begin with. All the reasons given for this appalling decision in the most sensitive area of the catchment, were economic

Limitations of the ToR

The Panel's ToR require investigation only of water quantity. There is nothing on water quality nor any reference to the full range of impacts on the Special Areas from mining. These include –

Subsidence impacts:

Water pollution – most notable still in Waratah Rivulet (WR)

Fugitive gas emissions – also noted in (WR)

Ground fissures – allowing infiltration of surface runoff that is then lost to the storages.
Noted in Dendrobium Area 2

Destruction of upland swamps

Loss of surface water in creeks and pools leading to local extinctions of water-dependent eco-systems

Cliff falls - Dendrobium Area 2

Surface disturbance for:

Seismic testing and borehole drilling in exploration phase.

Construction of vent shafts incl. all the infrastructure that involves – power lines, roads – and great volumes of traffic esp. heavy truck movements.

Remediation

Traffic resulting from movement of workers and equipment onto site (WR)

Vegetation clearing to establish work site (WR)

(See accompanying document *The Range of Impacts Observed in the Special Areas Due to Longwall Coal Mining* which illustrates these impacts.)

NPA values the Special Areas not just as drinking water catchments but even more so for their biodiversity and nature conservation importance. We are aware of WaterNSW's charter to uphold those values as well. As we see it, it is impossible for the Special Areas to continue to suffer the full range of observed impacts from longwall mining without their functionality for both drinking water catchment and nature conservation being seriously compromised.

Upland Swamps

The SCI Report of 2008 noted the need for greater understanding of the impacts of subsidence on swamps. At this stage Dendrobium had only undermined one swamp (Swamp 1) and, despite obvious bedrock cracking and desiccation, BHP continued to maintain that this was not due to mining!

It is then, again frustrating to note in the IEPMC report that, after more than 10 years there is still no clear understanding of the contribution of the upland swamps to stream flow. This failure to quantify their hydrological importance to the catchment allows for the cavalier approach that we have seen in the 2013 Dendrobium Area 3B approval that ensured the destruction of the most significant cluster of swamps in the entire Dendrobium lease area. The very first longwall (LW 9) cut a swathe beneath the centre of the 4 main swamps (Swamps 1a, 1b, 5 and 8). As the author has not been back to see the impacts, one can only imagine the scene when it is noted in the IEPMC Report on p.105 – *LWs 9-11 have impacted on every swamp that has been directly undermined ...*

We are well aware of what catastrophic results can ensue with the extreme desiccation of swamps. This is most starkly demonstrated at what was Swamp 18 in the old Cordeaux mine area. Here, after being undermined in the early 2000s, wildfires in 2003 burnt across the catchments and all vegetation in the swamp, right down to the roots in the peaty

sediments burnt. This would not happen in a healthy swamp where roots would be protected by saturated sediments. Subsequent heavy rains then eroded the bare sediments, creating deep gullies down to bedrock. The final nail in the coffin for the swamp in this situation is the invasion of dry sclerophyll vegetation such as wattles and eucalypts. This is now no longer a swamp. It has no water holding capacity like a swamp.

This very scenario could happen again at any time to all the undermined swamps in the Dendrobium area. In their already impacted state it would be impossible to quantify their contribution to stream flow as it is, although they may hold some water immediately after rain. If they suffer the fate of Swamp 18 then we will no longer have any swamps to measure.

This depressing situation occurs despite these swamps being listed by the state as EECs in 2012 and federally as TECs in 2014. These listings have offered them no protection and so make a joke of this legislation.

The recourse to offsetting, as applied in the Area 3B approval - *This involved transfer of 598 ha of land at Maddens Plains (including 140 ha of upland swamp) to the NSW National Parks Estate. As a result, impacts on, and consequences for, upland swamps due to extraction of longwalls above Dendrobium Areas 2 and 3 are offset fully.* (p.116 IEPMC Report) - is also a joke as this is not within the drinking water catchment. Also, as with all offsets, there is a net loss of something, so this must be seen as a spurious tactic to make destruction of natural features seem acceptable. So we dispute the statement in the Report that the impacts to the swamps in Area 3B have been "offset fully".

The sad fact too, is that there is no known way to remediate swamps impacted by subsidence. It has never been done in this area, at least. To remediate the cracked bedrock would entail removal of the sediments to gain access and so the swamp would be destroyed in the process anyway.

Illogical Consent Conditions

We have seen in the past what was a quite illogical consent condition applied re Dendrobium Area 3A. This was in regard to Sandy Ck waterfall. Very stringent conditions were drawn up to protect the structural integrity of the actual rockbar over which the water tumbled from Sandy Ck in to L. Cordeaux. Sophisticated monitoring was set up to detect any movement in the rock as the longwall approached.

The illogical aspect was that approval was given to completely undermine the 2 large feeder swamps (15a and 15b) which delivered water to Sandy Ck. So we had the situation where great lengths were required to be taken to protect the actual rock base of the waterfall but no-one cared about the water going over it. As it turned out, a large underground

geological feature, a crinanite intrusion, decided BHP against undermining Swamp 15a, the largest and main feeder swamp. Swamp 15b was undermined and its feeder creek was bone dry the last time the author saw it, with the signature swamp species, *Banksia robur* starting to die off and dry sclerophyll species such as *Persoonia* already starting to appear.

We are alarmed and again frustrated to see this same illogical application of the same sort of consent condition in Area 3B - *LW 14 is to be shortened to protect the bedrock reach of WC15 below Swamp 14.* (p. 42 IEPMC Report). So Swamp 14 is to be undermined and most likely destroyed but the bedrock of its outlet creek, a tributary of Wongawilli Ck, is to be protected. Why protect a dry creekbed? This makes no sense at all.

We note on p.105 of the Report it is stated that Swamp 15a is now to be undermined by LW 19. A close look at the mine plan in the Report, however, shows LW19 going very close to the western edge of the swamp but not under it. To return to the statement on p.105 – DPE (2015c) concluded that: *“it is clear that monitoring results identify that Longwalls 9 – 11 have impacted on every swamp that has been directly undermined or is located immediately adjacent to the longwall panel being mined.* This being the case, we strongly recommend that LW 19 be shortened so that it is set back further from the swamp.

Remediation

The SCI Report concluded that remediation *should currently not be relied upon as a forward management strategy for highly significant features* (p.119). This was in 2008 and in our view it still applies.

We note the Panel’s Report states - *Grouting has been used to restore some rockbars and pools in streambeds. The Panel observed the successful application of this technology at Waratah Rivulet.* (p.96) We wonder what their criteria for success are. In our experience, especially at Waratah Rivulet, PUR grouting efforts have been intrusive, damaging and unsightly, with PUR left oozing from cracks after months of work at each rockbar repair attempted. Advice from WaterNSW personnel is that only 50% of pool water holding capacity has been achieved.

What is known about the durability of such methods? Does the material break down over time? Could earth movements from earthquake tremors open up cracks again?

Conclusions

We think we can be forgiven for extremely cynical about this whole process of yet another inquiry into the issue of mining in the Special Areas. For most people it’s a complete “no-brainer” – anything that degrades the catchments and compromises their functionality for water supply just shouldn’t be happening. This is especially significant for the people in the Illawarra and Macarthur regions for whom the dams in the Metropolitan Special Area are their sole supply of water and for those in Sutherland Shire and down to Helensburgh who

rely solely on Woronora Dam. The fact that dam levels are dropping rapidly and huge population growth is being planned for the Macarthur region, in particular, is cause for great concern.

That being said, the efforts of the Panel to come to grips with the plethora of issues in its brief are admirable and will hopefully yield valuable insights. Whether any of this will lead to meaningful change in government policy, though, is the real issue.

Despite the harm management hierarchy of 'avoid, minimise and offset' being the stated overarching approach to managing impacts when approvals are considered, it's obvious that this can be and is, thrown out the window when an economic argument gets in the way, as with the Dendrobium Area 3B approval where offsetting was the first recourse, not the last. A cluster of 12 major swamps was consigned to destruction because BHP had proceeded with first workings for LW 9 without approval and complained that "the sky would fall in" if they didn't have approval to continue.

The author was told by a senior Planning official responsible for the approval that they knew LW 9 would destroy the swamps so couldn't see any need to mitigate impacts with the subsequent longwalls. As we have seen offsetting was immediately applied because of this. If that whole sorry scandal would not make a person cynical, then we don't know what would.

It is reassuring, to some extent, to note the tone of this first report and the general cautionary nature of its recommendations so far. This is especially so where the effectiveness of TARP triggers is discussed (p.116) -*the Dendrobium Mine TARP triggers related to surface water quantity are ineffective ... The Metropolitan Mine TARP triggers related to surface water quantity are also potentially ineffective* and on p.117 - *The TARP triggers related to swamps are ineffective*. What needs to be said, though, is that swamps cannot sustain any such undermining. It's just too risky.

To conclude, it's obvious that so much is still unknown about the totality of impacts to our Special Areas from mining. It's very likely that much is actually unknowable. That we should continue with intensive longwall mining with this level of ignorance is irresponsible in the extreme, especially as we enter a period of climate change which will very likely exacerbate those impacts.

Public expectation is clearly that these impacts are unacceptable and water security should be paramount in managing those catchments. If this were the case, then their values for nature conservation would be preserved as well.

The time taken to understand the extent of the impacts we already know are occurring, before taking real action to prevent those impacts, just sees further degradation and irreparable damage, especially to swamps.

Longwall coal mining should be stopped in our Special Areas as soon as possible, not when studies are complete which only confirm what we already know or suspect. We hope that the Panel can convey this strong stance which we know is shared by many community groups and individuals who have responded to this Report.

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