

1.

Comment to the Independent Planning Commission on Ulan Coal Mines Limited proposed Modification 4

by **Geoff Mitchell 23rd June, 2019** on behalf of Geoff and Mary Mitchell, owners of the property [REDACTED]. This comment will add some detail to the issues discussed on site at Woodbury on the 19th June, 2019 with Commissioners Gordon Kirkby and Brett Whelan and Planning Officer Jorge Van Den Brande and myself. The discussion was carried out at the Mona Creek Site 27 next to UCML's infrastructure pad in the shadows of the Mona Creek Cliff line. Commissioner Professor Chris Fell inspected other areas of Woodbury relating to MOD 4.

Some general background.

- Woodbury is a property of just over 200 hectares, most of it will be mined under by UCML. A small section in the S/E corner has already been mined. The property has been owned by us since 1977. It was our family home for almost 30 years. We have cropped, made hay and grazed cattle in a small way over a period of 40 years.
- My family, particularly my eldest son and myself have a strong attachment with the property and do not wish to sell the property to UCML.
- I have dealt with this coal mine for over 20 years and both parties have always maintained a cordial and professional relationship.
- I am a Registered Surveyor and have operated a very small surveying practice for approximately 30 years and have carried out dozens of surveys in the immediate and surrounding areas of UCML operations.
- I have been a member of the UCML CCC for almost ten years.
- I did study as part of the UNSW Bachelor of Surveying Degree geology and hydrology but any knowledge gained there has been lost in the fires of time so any observations I make on those subjects below would be those of an observant surveyor/farmer/grazier.

My main focus in this comment is on the three subjects of subsidence, cultural heritage and the availability of shallow water, both permanent and temporal as they apply to Woodbury. These were the three subjects noted in our original comment on MOD 4 to Anthony Ko at DP & E on the 1st May, 2018 in response to the MOD 4 proposal. These three main subjects flow through our various comments made to UCML and DP & E since MOD 4 was proposed and can be referenced to in document Annex. E11 on the IPC website. My knowledge of other aspects of the proposed MOD 4 and UCML operations generally is limited to what I learn at CCC meetings.

2.

SUBSIDENCE



Photo 1. Subsidence crack at Woodbury from mining LWW5, 17.06.2019.

To date UCML have mined under that section of Woodbury as defined by the various diagrams illustrating LWW5.(see Charlie Allan's presentation).The mining of this section approximately began at the beginning of 2019.UCML's Lucy Stuart and myself regularly inspect the mined area. Photo 1 is of the largest crack that we have discovered so far. I will address the subject of subsidence in relationship to shallow aquifers if a crack similar to the above occurred under them later on page 16 but I will first focus on subsidence in relationship to the documented rock fall next to Mona Creek Site 27. This site is on the common boundary between UCML's Lot 8 and Woodbury , see photo 7, and situated approximately 150 metres from UCML's infrastructure pad.

The rock fall was first noticed by my neighbour Hiemo Petzl just before the 18th March 2014. He had felt the tremor from his house approximately a kilometre away and from his former mountaineering days in Austria recognised the distinct acrid smell of large rocks smashing together.

3.



Photo 2. Rock fall next to Mona Creek Site 27

The above photo illustrates the rock fall. As noted in my email to Ken Mills dated Nov 5, 2018 and I quote:

“The rockfall was first observed by myself on 18.03.2014, it probably happened a week or so before.

On a site visit on the 5th May, 2017, this rock fall was observed by UCML’s Robyn Stoney, Charlie Allan, Rod Reinhard and Tara Stokes. I subsequently sent the first attached photo here to UCML.

On June 1st, 2018, Anthony Ko and Paul Freeman from DP & E visited the rock fall site and photographed it.

Mary and I met with Robyn on the 2nd November 2018 and had another look at this rock fall and took some photos.” End quote to Ken.

If we now look at the Annex E11 document on the IPC website, the letter dated 25 January, 2019 to Ms Jessie Evans at DP & E from UCML it states re subsidence: *“ The owner of ‘Woodbury’ wanted to know if the rockfalls that occurred on ‘Woodbury’ in 2014 were from mining related impacts.*

4.

To best examine this statement to Ms Evans I will again quote from my email to Ken Mills dated Nov 5, 2018, starting one sentence back from where I left off.

“Mary and I met with Robyn on the 2nd November, 2018 and had another look at this rock fall and took some photos. Robyn observed both horizontal and vertical cracking and some dampness in the remaining wall behind the rock fall.

At this meeting on Friday and also in a previous phone call, Robyn explained she was under the misapprehension that we thought that some mine activity [see also her email to you] had caused this rock fall and having knowledge of mine activity at this time she thought it was impossible that UCML had caused this rock fall and therefore did not advise the relevant consultants when Mod 4 was being developed. I pointed out that having gone back through all our emails to Robyn on this subject that we had never put this proposition forward that the mine had caused the rock fall. I would observe that the extensive tree root system and water seepage had a fair bit to do with setting up this occurrence.

Our point is that if you are going to increase the length of your longwalls to gain more coal and you are assuring all parties that the cliffs will not be disturbed by Modification 4, should you not investigate the stability of this cliff line structure in the light of this rock fall. Several trees are growing along the edges of these cliffs and therefore similar situations to the current rock fall may be existing in other sections.

There is also some heavy construction work going on approximately 200 metres from the cliffs including the construction of three dewatering bore holes, the consolidation of a large pad and the creation of a medium size tailings dam. We have signed off on a one year noise exceedance agreement with UCML which would indicate serious work being done in the vicinity of these cliffs.” End quote to Ken. I would note that if we were worried about mine activity causing the rock fall I think we would not have waited three years to mention it

UCML have assured us in the draft “Woodbury” Private Property Subsidence Management Plan for LWW6, LWW7 & LWW8 that *“boundary gates and fences are inspected regularly,”* Surely a large rock fall 25 metres from a UCML boundary would have been observed.

Whatever the circumstances here were, Ken Mills, the Senior Geotechnical Engineer with SCT carried out his survey on the 3rd December, 2018 together with Lucy Stuart and myself.

Ken spent several hours assessing the Mona Creek Cliffs on Woodbury and his report is on the IPC website ref:Annex E12.

5.

I have met Ken on two occasions at Woodbury on site inspections. These inspections were professionally enjoyable and full of information.

On Monday 17th June, 2019, I had a walk over the site above the rock fall. Walking along near the edge of the cliff I came across a 7 metre black pine tree leaning over. To see how stable it was I poked it with a small stick wherein it disappeared over the edge taking dirt and rocks with it. The tree movement and impact below were quite evident at the top of the cliff. Mary is considering nominating me for a Darwin Award. Ken did mention to me on the 3rd December inspection that a full geotechnical survey of the whole cliff line would take a couple of weeks. The IPC party did observe this tree [Photo 6] and what appear to be precarious rocks around this site.



Photo 3. The leaning black pine tree can be seen at the top of the photo just left of middle.

Ken's report on the rock fall would have to be the most rigorous explanation for it occurring considering his extensive knowledge of UCML sites. Other causes put to me in discussion have been repeated blasts over many years at the open cut and earth tremors experienced by neighbours in the last 3 to 4 years. It seems ironic that UCML asked me for permission , which we granted, to place blast monitors at our house at Woodbury on the 23.03.2017 and 10.05.2018 to monitor blasts at the Bobadeen quarry. Why not take advantage of the event by monitoring any movement at the cliffs?

6.

There obviously has been other substantial movements at this rock fall since 2014. Comparing Photo 3 with Photo 4 below you will see that the large tree at the top right hand edge of the rock fall in Photo 4 has fallen over the cliff (see Photos 5 & 6), sometime between 18.03.2014 and 31.01.2019.



Photo 4.



Photo 5. Large stringybark. Tape extended to 1 metre.

7.



Photo 6. Rock fall. Black pine in foreground with large stringybark which has fallen between 18.03.2014 and 31.01.2019

With regard to subsidence and MOD 4, Ken's vast knowledge of UCML sites, pre and post mining makes me confident of his predictions as long as this cliff line is truly stable. You will note in his report Ken does mention on page 2 second last bullet point that:

“ a vibration monitoring system installed along the top of the Mona Creek Rock Shelter site would be helpful to confirm that there are no further vibrations occurring from the shaft construction activities that have the potential to impact the rock shelter sites - none are expected, but it would be helpful to have a record showing this is the case.”

Why not put a monitoring system in before work commenced on the infrastructure pad. Infrastructure on this pad will be utilised by some of the extensions proposed in MOD 4 and surely UCML work out the interaction between its various activities proposed and actual.

Considering the comments and photos above, the construction of a large compacted pad, three dewatering bores and a large borrow pit dam may have already affected the stability of the area in the vicinity of the rock fall and adjacent shallow aquifers. I will deal with this aspect under the heading **WATER**.

8.

CULTURAL HERITAGE



Photo 7. Boundary fence on left. Mona Creek Site 27 in middle, rock fall on right.



Photo 8. Mona Creek Site 27. Wombat diggings, western end. Boundary fence at bottom left.

9.



Photo 9. Mona Creek Site 27. Eastern end.



Photo 10. Mona Creek Site 27.(also identified as Ulan Site ID#184)

10.

Mona Creek Site 27 is a wonderful natural feature . The structure and colours are timeless and always a rewarding spot to visit. The Mona Creek Cliff line will remain intact under our stewardship. (ie no harvesting of bush rock, tree removal and associated activities).

Coal mining brings with it cultural protocols which to us disturb the privacy and amenity of this geological feature and combined with Mid-Western Regional Council's Planning policies may create a de facto Restriction as to User. We do have reservations about these cultural protocols and I find the latest assessment by Southeast Archaeology Pty Ltd puzzling.

Peter Kuskie from SEA met on site with UCML's Brad Tanswell and myself on Tuesday 15th January, 2019 . From about 30 metres away from the rock fall Peter observed that the rock fall had not impacted on Mona Creek Site 27. Visually from that distance, see photo 7, I would agree with Peter as you get a decent perspective of the rock shelter in relation to the rock fall. Peter then proceeded to assess Mona Creek Sites 23~27. His report is on the IPC website ref:Annex E13. On his journey back to Mona Creek Site 27 Peter discovered a small quartz chip (22mm x13mm x 6mm) in a small shallow rock shelter away from the cliff line. This now becomes Mona Creek Site 372 and I presume logged in due course into the AHIMs data base.

What I find puzzling is that if you draw a straight line between Mona Creek Site 372 and Mona Creek Site 27, it runs through the middle of the rock fall. As one of the most high potential sites on Woodbury is found away from rock cliffs in the vicinity of Mona Creek could there not be quartz chips under the hundreds of tons of rock? So even though Mona Creek Site 27 is not directly affected by the rock fall there could be a PAD (potential archaeological deposit) under this rock fall especially if the rock fall covers a wombat hole.

David Maynard has visited Woodbury on several occasions and we have discussed cultural issues many times when we have run into each other in Mudjee. Ken Mills related to me that David was responsible for bringing the Mona Creek Cliffs to the attention of mining executives in the 90s and I have always found David to be very genuine in our discussions.

Even though I am a surveyor, I do realise that some things cannot be measured. However when I find a series of phrases on the one page such as "*potential deposit*" ~ "*and probably much greater,*" ~ "*inferred to be cultural,*" ~ "*possibly freshwater mussel,*" ~ "*potentially cultural,*" you are starting to lose my attention. See report on Mona Creek Site 27.

What I find really hard to comprehend in Peter's report on Mona Creek Site 27 is that the western two-thirds of the shelter has potential deposit of moderate to high research potential and the eastern third of the shelter (next to the rock fall) has deposit of minimal potential and artifacts appear to be intentionally cached for future use at rear of shelter. Since we have owned Woodbury the resident wombats have dug relentlessly in this shelter, see burrows at the bottom of photo 8.

11.

Wombats when digging or in a defensive move can throw dirt and rocks a long way. If the ancient inhabitants of this shelter were able to return, I think they would be pretty cranky at its present state.

Now referring back to UCML's letter to Ms Jessie Evans, I sent an email to Ms Evans on the 24th Feb, 2019, to clarify our position on cultural heritage. I said that we did not ask whether the rock fall had changed the significance of the Mona Creek Heritage sites. What I did say to Ms Evans and I quote:

"If UCML are going to great lengths to assure people about the stability of the cliffs in relation to Mona Creek Heritage Sites via their Mod 4 application, why not ask Peter Kuskie to carry out his survey and include that submission in the Mod 4 application. UCML never approached us to carry out a survey in relation to Mod 4 until Jan 2019. That rock fall was viewed by UCML management on the 5th May, 2017. If you are carrying out major earthworks within 200 metres of a sensitive Aboriginal Heritage site [ULAN ID#184] and perhaps the cliff line is unstable, would it not be good practice to monitor this cliff line. I do not have access to Peter's full report but I note in the letter to you that 8 of the sites have low research potential. The irony being that this would have aided UCML's application. I note that when Mid-Western Regional Council were upgrading the Ulan Road in 2017, they engaged Triaxial Consulting to carry out a Construction Vibration Assessment on Frog Rock which I understand is an Aboriginal Heritage Site. So why not along the Mona Creek Heritage Sites? A mitigating factor here is that Frog Rock was only approx. 50 metres from the construction but digging a large dam with a bulldozer can create vibrations that transmit a fair way. I have been a Registered Surveyor for 45 years and worked on bridge and freeway construction on and off throughout my career." End quote.

So, regarding Subsidence and Cultural Heritage, my opinion is that sections of the original application were poor and the application was rushed and the DP & E Assessment does not adequately deal with our concerns as noted in our six emails (see page 16) to DP & E. If Ken and Peter's investigations had been commissioned and included in the original submission, professional opinions from members of the Subsidence and Cultural Heritage disciplines may have been sought by interested parties.

With regard to Cultural Heritage, it should be noted that Peter Kuskie in a letter dated 4 January 2019 to UCML's Brad Tanswell regarding Mona Creek Sites stated and I quote:

"The primary goal of the field inspection will be to record sufficient information to assess the significance of the sites and any potential rockfall related impacts. This is a technical assessment and may not occur with representatives of the registered Aboriginal stakeholders (who have previously provided input into the cultural significance of the sites) unless they are invited by UMCL to attend. However, without the registered stakeholders, this inspection may not be sufficient to fully address Section 3.4 of the HMP."

12.

I did email Ms Jessie Evans on the 8th May and relayed this information to her. She replied that the Aboriginal stakeholders would have an opportunity to comment when the extraction plans were being developed. It is interesting, noting Peter's brief here, that he was able to move away from the cliff line and discover a new site.

Even though my comments in the above eleven pages regarding Subsidence and Cultural Heritage may be considered by some to be mildly critical, the status quo at Woodbury at this point in time is that the Mona Creek Sites are apparently pretty stable except for the odd tree and rock falling over the cliff next to Mona Creek Site 27 and the cultural heritage sites are as they were, with confirmed low potential status except for Mona Creek Site 27. In my opinion, as stated at the site inspection, not enough evidence to refuse the application based on the documented processes, poor as they were, that have affected Woodbury.

I will move on to the third and final subject and to Mary and I (and most other landowners), the most important ~ water. (shallow aquifers)

WATER



Photo 11. Mona Creek within Woodbury in the vicinity of MOD 4 extension to longwall W8. Well defined bank in this area and throughout Woodbury.

13.

When you take on most professional tasks you carry out two important actions. You obtain all available documents on public and private record related to the task and you consult with the person who is primarily affected by the work being undertaken.

In the case of MOD 4, you obtain the old Crown plans which often show the position of permanent and semi permanent water. Often blocks first surveyed in a district were those with reliable water supply. Often the concentration of aboriginal activity logically was related to the ability to access water

With regard to MOD 4 the only note on a survey plan is that of the plan of Lot 8 in DP750735 (circa 1869) that the extension of Ulan West LW7 protrudes into. This plan states that *"there is a small water hole on this portion that seldom dries up."*This Lot 8 encompasses the infrastructure pad and all the works that have been constructed. I may have missed it, but I did not note mention of this plan in the initial AGE paper re MOD 4.

As mentioned on page 1, I have very little knowledge of geology and hydrology and absolutely no knowledge of the ancient art of modelling. All observations subsequently made here are from the perspective of an observant surveyor/farmer/grazier.

For nearly thirty years I have carried out dozens of boundary surveys and subdivisions in the immediate and surrounding areas of the various UCML mining leases. The abundance of shallow available water for domestic and stock use is remarkable. Wells, springs, swamps together with reliable bores are a feature of this district around Woodbury. It would be extremely difficult to exist on the mostly marginal to poor country without underground water.

My diary has let me down here but I think sometime in the 1990s there was a very dry period. My neighbour Geoff Andrews and myself were relying on the two remaining springs we had and we commenced to look for shallow water with a backhoe and with the help of a the former owner of Geoff's property, Freddie Scott, whose knowledge of this land went back to the 1940s . Freddie pointed and we dug and in two spots along and near Mona Creek we were able obtained water from small soaks that filled the holes dug overnight. Further down near Blue Springs Road we found a truly remarkable water hole two metres down on the black soil flats. We were desperate and finding this water got us through.

I have read most of the material related to Mona Creek re MOD 4 in the various submissions. **Ephemeral** ~ yes. **Not a well defined watercourse and does not have defined bed or banks** ~ well on Woodbury the banks are defined and water runs down exactly the same route when it flows. **Water holes** ~ two on the previously mentioned Lot 8. There are no natural permanent water holes in Mona Creek that I am aware of on Woodbury.

14.

Until 19th January, 2019 no one from AGE consultants to my knowledge had carried out any on site inspections at Woodbury. To me it seems amiss to discuss the various attributes of Woodbury's water supplies in the MOD 4 application without actually stepping onto the place and cattle cannot drink the results of poor modelling. Mary and I were not consulted about our knowledge regarding water of our property or the knowledge we had acquired from former owners, the Farris, going back to the 1940s. I believe Julia Imrie's excellent presentation has dealt with "modelling" generally of the UCML's sites so I will not pursue that issue here.

I believe it was crucial that UCML should have carried out rudimentary water pre activity checks before proceeding with MOD 4 and the infrastructure carried out on Lot 8. Below is Photo 12 of a borrow pit dam constructed in 2018. The soak my neighbour and I found noted on page 13 was in Mona Creek just to the north of this dam.



Photo 12. Borrow Pit Dam on Lot 8.(31.01.2019)

15.

This dam filled up very quickly. As we had not had a lot of rain generally most of this water is from drilling three dewatering bores approx. 25 metres from our boundary. The dam is approx. 120 metres from our boundary. So my question is, what underground source is supplying this water. Approx. 150 metres from our common boundary with UCML there is on Woodbury the confluence of two main sections of Mona Creek. This confluence should be the first point of investigation re shallow aquifers. So where is this abundant water coming from. Aquifers on Lot 8? Aquifers on Woodbury? Without any pre activity ground monitoring or investigation we do not really know. Photo 13 below indicates the water activity from drilling the 3 dewatering bores. I note that on page 17 of the DP & E MOD 4 Assessment that UCML are proposing to install at least three monitoring bores in the Mona Creek alluvium in the area north of UWO LWs 6-8. This may achieve the stated purpose but could also aid investigations into a possible future extension of UWO LWs 9-11.



Photo 13. Run off from drilling dewatering bores on UCML's Lot 8 draining to Borrow Pit dam.

We think that several investigative sites should have been established within the Mona Creek MOD 4 site to monitor any water assets and that the interaction between the proposed MOD 4 and current and proposed mining activity on Lot 8 should have been considered. It has been pointed out to me by UCML and their consultants that the shallow aquifers and the deeper groundwater are not connected. I say, and referring to Photo 1, if a subsidence crack similar to what is illustrated here develops under a shallow aquifer, it will drain.

16.

It may repair, it may not. Who knows how the ancient soil structure has been damaged and how long will it take to repair. Who knows how normal subsidence affects subsoil moisture and shallow water over long periods of time. Close consultation, quoted several times in the MOD 4 Assessment, is only as good as the results it produces for the landowner.

To UCML's credit, at the last Bungaba Community meeting UCML did ask some assembled landowners within Exploration Lease 8687 to advise them of their existing water assets. This is vital to get a realistic assessment of the situation on the ground and this is what should have happened on Woodbury.

SUMMARY. I have attempted here to summarise my various emails to DP & E throughout the MOD 4 application process. These emails are addressed and dated as follows:

- 1st May, 2018 ~ email to Anthony Ko ~ original comment re MOD 4.
- June 14th, 2018 ~ email to Anthony Ko ~ Summary of inspection at Woodbury by Anthony Ko and Paul Freeman from DP & E.
- Aug 29th, 2018 ~ email to Anthony Ko ~ comments re replies to MOD 4 submission.
- Oct 24^h 2018 ~ email to Anthony Ko re proposed inspection of rock fall re Robyn Stoney and Ken Mills.
- Feb 24th, 2019 ~ email to Jessie Evans ~ my reply to UCML's submission dated 25.01.19 to DP & E. (ref: ANNEX E11)
- May 8th, 2019 ~ email to Jessie Evans re Cultural Heritage survey.

If IPC wish to obtain copies of these emails from DP & E I have no problem with that and I would ask the Commissioners to evaluate the Assessment of MOD 4 by DP & E in relation to Woodbury considering the information Mary and I have provided in our comments.

I do have difficulties with some of the statements by DP & E's Assessment, especially on pages 16 & 17. There are also errors, ie page 16, paragraph 4 ~ we actually have only signed off on a PPSMP with UCML for LWW5.

If the Commissioners wish to discuss any of our comments, Jorge Van Den Brande has our contact details. I have only looked at two of the presentations given on June 19th ~ Dr Fergusson's and Julia Imrie's. I decided not to read any more as it becomes like an interrupted shout at a pub. You do not know the appropriate time to stop. (commenting)

Finally, I will repeat part of the last two sentences in my email to Jessie Evans 24 Feb, 2019.

" We are not anti coal and we consider it reasonable for UCML to maximise its coal gain. Just carry out the task with due diligence, have respect for the land owners and their country and employ the best methods available to minimise damage to country."

It is our opinion that these principles have not been fully realised.

Geoff Mitchell for Geoff and Mary Mitchell