The BMPA opposes the Wambo Coal Pty Ltd Mod 17 Underground mine proposal.

This is yet another instance of the NSW Government not correctly assessing the cumulative and long term impacts and costs of a project. This part of the Hunter has been damaged too much by coal mining already.

The broad cumulative impacts to the local area have not been assessed which has and will result in further general and permanent degradation of the living environment.

The government needs a better mine assessment process. The current process is clearly not working if individual mines in an area of intense development such as this can be approved without a regional, cumulative assessment of total impact.

The mining sector is increasingly affecting the Hunter Valley and our communities are extremely concerned about cumulative impacts and their long-term effects.

Cumulative impacts on water sources, biodiversity, neighbours and the World Heritage listed Wollemi National Park have not been correctly assessed in the proposed Mod 17 and they definitely don't include the combined impacts of the surrounding mega mines of Hunter Valley Operations, Warkworth-Mt Thorley, United and Bulga operations. There has been no attempt to study the cumulative impacts of this project with other major mining projects in the area, including the proposed United Wambo open cut "super pit" project, a joint venture between Glencore and Peabody.

It is totally unacceptable that in the Report, the IESC noted that the magnitude of potential impacts associated with Mod 17 is likely to be small, relative to the impacts caused by the existing mine and other It is a silarger mining operations in the area. This 'in for a penny, in for a pound' attitude is totally unacceptable. Iguess all mine proposals in our area get the green light because the Dept figures it's already been irreparably damaged, According to the DPE.

In towns like those in the Singleton LGA, there was a distinct shift in focus during the early 1990s from a community focus on direct impacts to one of cumulative impacts of multiple mining operations. Singleton and many of its nearby towns and villages, formerly rural towns in a dairy and farming district are now surrounded by half a dozen or more huge mining operations.

The main cumulative issues of concern to these communities are feelings of 'social dislocation', a changing sense of place, health concerns, biodiversity loss, dust, noise, vibration and loss of visual amenity. Many once vibrant Hunter Valley rural communities have been decimated by Coal mines.

The Hunter Valley is full of ghost towns....Warkworth, Camberwell, Ravensworth, Wollar and others like Bulga which will soon be added to the list.

Small towns and villages like Bulga continue to be so heavily traumatized by the cumulative impacts of coal mining that they are referred to as 'Dead man walking'....towns that have had the writing scrawled on their walls for them by foreign mining companies and complicit State and Local Governments.....soon to be shut down in the path of coal mining juggernauts.

The Minerals Council and the DPE are trying to prove that they can mine absolutely anywhere in NSW and not be responsible for the collateral damage they cause. The mining companies are just a law unto themselves and the department goes along with it. Unfortunately for the people of NSW, greed and collusion still prevails over proper and fair procedures. Mining companies put out reports and there's tens of thousands of words, and the department talks about applying stringent conditions, but it's just words.

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The reality is communities and landholders are on their own while the DPE and mining companies do what they want.

Farmers and property owners from around NSW have protested about what they say is the "intimacy" of the state's planning department with the mining industry.

They have lodged a lengthy log of claims detailing examples of the department making decisions favouring mining at the expense of communities and the environment.

In the Peabody response to submissions on the Environmental Assessment Part A it states that...'Peabody operates within the NSW Government's stated policy of **ensuring** that the people of NSW do not incur a financial liability as a result of coal, mineral and petroleum exploration and production activities'.

Despite this stated policy ensuring that people don't incur financial liability as a result of their coal exploration and production activities, this does not ring true in the case of our near neighbours, the Fenwicks.

The expensive and frustrating process for the Fenwicks started when the first Wambo Coal longwall operation went under the 240 hectare Fenwick property from May, 1991. A report noted, the mine had the potential to affect more than 90 per cent of their property.

The battle between the Fenwicks and Wambo Coal has included Land and Environment Court action to force Wambo to comply with consent conditions after subsidence beneath South Wambo Creek within the property, and successful Supreme Court action by Mr Fenwick after Wambo blocked his right of way for three years, and then misled him about what it was doing.

In September 2016, Wambo Coal owner Peabody Energy finally completed a bridge across South Wambo Creek five years after Supreme Court Justice Richard White ordered it to be built in 2011. The order came with the threat of contempt proceedings that the judge decided was "necessary to ensure that Wambo... respects Mr Fenwick's rights".

In early 2011 Justice White ordered Wambo to pay Mr Fenwick's legal costs after the company took more than a year to respond to his claim to have the right of way respected. Wambo also repeatedly failed to comply with court orders.

As Justice White summed up: "The defendant (Wambo) has treated the plaintiff (Mr Fenwick) and the orders of the court with disdain. The defendant's defaults are inexcusable."

Wambo argued in 2011 that Mr Fenwick's right of way, based on a 1915 agreement, was not recorded on certificates of title in 1971. It lost that argument because it was a Wambo subdivision, lodged soon after it bought the property, that failed to record the right of way.

After eventually conceding in court that Mr Fenwick did have a legal right of way, Wambo argued the right only extended to Mr Fenwick. His wife and family were excluded, Wambo said. Justice White rightly rejected the argument as "absurd".

Under the original agreement Wambo agreed to remediate the creek after subsidence and cracking in the late 1990s caused the loss of more than 13 megalitres of creek water a day, and reduced the creek to a "highly fragile" state which denied the Fenwicks their former water access. Under the 1992 consent Wambo was required to take reasonable steps to ensure the continual flow of water in the creek, after warnings that underground mining would affect it.



Wambo's attempts in 2002 to rehabilitate the creek by placing rock structures at nine points were described as "ad hoc", and needed to be removed to "improve creek functionality", the Department of Planning has conceded.

In a letter to Mr and Mrs Fenwick Department of Planning secretary Carolyn McNally said negotiations were focused on Wambo Coal "committing to rehabilitate" the creek and providing a financial package to the Fenwicks to "compensate for the lack of certainty around historical creek flows".

Ms McNally said, "The department is committed to resolving this issue and will continue to facilitate discussions between yourselves and Wambo Coal".

Six months later, Ms McNally wrote that the department "agrees that historical non-compliance with the 1992 development approval by Wambo Coal has resulted in a lack of baseline data for South Wambo Creek, creating uncertainty for completion criteria" relating to its rehabilitation.

This is a prime example of how the DPE and Wambo Coal operate. It also proves WCPL is not a fit and proper proponent.

There is no doubt that the communities and farmers have a legitimate interest in protecting our water resources and our farmlands unlike the DPE and mining companies such as WCPL.....but all we see are sweeping plans to cut "green tape".

The Mod 17 cause more subsidence and will pose further serious threats to our precious water resources.

We need to protect natural groundwater flows so creek and watercourse levels don't disappear endangering flora, fauna and people that rely on that water. And protect the sub level aquifers that nourish other areas or are in use directly by other existing users.

The Upper Permian coal measures (which are generally saline aquifers) within and around the mine footprint are already largely desaturated due to intensive mining at North Wambo Underground, United Underground and South Bates Underground. Overall, historical and ongoing open cut and underground mining within the Wambo area and adjoining mining operations have created a regional zone of depressurisation within the coal measures.

Depressurisation means that they have pumped the groundwater out for mining and lowered the groundwater levels. This causes water pressure in the aquifers to drop.

The approved South Bates mine would cause depressurisation of the Permian strata. While the proposed modification would cause additional drawdown in the overburden and Whybrow Seam, the main impact from the proposed modification (outside the mine footprint) would be depressurisation within the Permian strata to the immediate south and west. This is not expected in the north or east due to the adjacent open cut and underground mines.

The proposed modification could reduce groundwater pressures up to 55 m in the overburden above the Whybrow Seam and in the Wambo Seam (below the Whybrow Seam). In the Whybrow Seam reductions in groundwater pressure of approximately 200 m are predicted. The Department notes these impacts are generally limited to the proposed modification footprint and does not consider them to be significant at the regional scale. These saline, hard rock aquifers are also not considered to have any significant utility for agricultural or other purposes.

Damage to some creek systems in the Hunter Valley has already been identified by the NSW Scientific Committee (NSW SC) and the Dept of Sustainable Natural Reasources as being associated with subsidence



due to longwall mining. Among those listed as affected creeks was Wambo Creek (2003). They stated that damage had occurred as a result of loss of stability, with consequent release of sediment into the downstream environment, loss of stream flow, death of fringing vegetation, and release of iron rich and occasionally highly acidic leachate.

This expansion will cause further subsidence under North Wambo Creek; this plus the creek diversion, including associated alluvial aquifers is far too great an impact to be considered, let alone approved. Increased ponding, cracking and loss of base flows is unacceptable.

The NSW Scientific Committee also stated that mitigation measures to repair cracking creek beds have had only limited success and are still considered experimental. Wambo's attempts in 2002 to rehabilitate the creek by placing rock structures at nine points were described as "ad hoc", and needed to be removed to "improve creek functionality", the Department of Planning conceded.

Mitigation measures themselves may have additional environmental impacts due to disturbance from access tracks, the siting of drilling rigs, removal of riparian vegetation, and unintended release of the grouting material into the water. Planning for remediation measures may also be hampered by the lack of predictability of some impacts.

Mining subsidence is associated with cracking of valley floors and creeklines and with subsequent effects on surface and groundwater hydrology. Subsidence-induced cracks occurring beneath a stream or other surface water body result in the loss of water to near-surface groundwater flows. If the water body is located in an area where the coal seam is less than approximately 100-120 m below the surface, longwall mining can cause the water body to lose flow permanently. An already-reduced flow rate due to drought conditions will increase the impact of water loss through cracking.

## Subsidence is a major threat to the land, water, flora and fauna.

Wambo Mod 17 is a requests for a further nine longwall panels. This brings the total number of longwalls at the mine to triple what was originally proposed in 2003. This poses a greater threat to the already substantial subsidence problems caused by existing mining on the Wambo site.

The Scientific Committee, established by the Threatened Species Conservation Act, has made a Final Determination to list **Alteration of habitat following subsidence due to longwall mining** as a KEY THREATENING PROCESS in Schedule 3 of the Act.

The Scientific Committee has found that:

The principal surface impact of underground coal mining is subsidence.

Longwall mining can accelerate the natural process of 'valley bulging' (ACARP 2001, 2002). This phenomenon is indicated by an irregular upward spike in an otherwise smooth subsidence profile, generally co-inciding with the base of the valley. The spike represents a reduced amount of subsidence, known as 'upsidence', in the base and sides of the valley and is generally coupled with the horizontal closure of the valley sides. In most cases, the upsidence effects extend outside the valley and include the immediate cliff lines and ground beyond them.

Subsidence causes contamination of groundwater by acid drainage, increased sedimentation, bank instability and loss, creation or alteration of riffle and pool sequences, changes to flood behaviour, increased rates of erosion with associated turbidity impacts, and deterioration of water quality due to a



reduction in dissolved oxygen and to increased salinity, iron oxides, manganese, and electrical conductivity as recognised in the Mod 17final assessment report.

Loss of native plants and animals occurs directly via iron toxicity, or indirectly via smothering. Long-term studies indicate that reductions in diversity and abundance wildlife in the vicinity of longwall mining and these effects may still be evident 12 years after mining.

The method used in this mine proposal is like the fracking (cracking) of sub strata, in that their subsidence takes out ground structures already present. This mine should only proceed if the impacts have been thoroughly considered and accounted for in evaluating the merits of the project, which in the case of Mod 17, they clearly haven't been.

The extraction of coal and the subsequent cracking of strata surrounding the goaf may liberate methane, carbon dioxide and other gases. Most of the gas is removed by the ventilation system of the mine but some gas remains within the goaf areas. Gases tend to diffuse upwards through any cracks occurring in the strata and be emitted from the surface. Gas emissions can result in localised plant death as anaerobic conditions are created within the soil.

The EPA noted in the final report that if flaring of methane derived from longwall panels is necessary, licensing under an EPL would be required and recommended conditions to manage flare and emissions. The Dept. said they supported this proposal and recommends that WCPL must reduce visible emissions 'as far as reasonable and feasible' .... What does that mean?.....We know who that will be reasonable & feasible to.....Wambo Coal.

Subsidence due to longwall mining can destabilise cliff-lines and increase the probability of localised rockfalls and cliff collapse. These rockfalls have generally occurred within months of the cliffline being undermined but in some cases up to 18 years after surface cracking first became visible following mining.













The mine is already too close to the Wollemi National Park and extension of 9 longwall panels under this World heritage listed NP must not be allowed, given that we know it will cause rock falls and instability of cliff lines and steep slopes.

You must investigate further the effects and possible effects that this extension of underground longwall operations have had on sensitive areas such as the Wollemi National Park.

Subsidence can also cause decreased stability of slopes and escarpments and in view of the NSW Scientific Committee, alteration of habitat following subsidence due to longwall mining adversely affects two or more threatened species, populations or ecological communities, or could cause species, populations or ecological communities that are not threatened to become threatened.

The IESC also noted that the cumulative drawdown will extend into Wollemi National Park and they say that given the depth to groundwater in the Park and minor draw down predicted "no significant hydrological impacts are anticipated"

It would be totally irresponsible to approve Mod 17 based on the information given by WCPL.

In view of WCPL's past record, there is no way that any of these issues will be sorted out by management plans post approval.

Peabody has demonstrated contempt for procedure, people's rights and also repeatedly failed to comply with court orders and decisions.