26 April 2018 Mr. Snow Barlow, chair, IPC Committee determining Boggabri Coal Modification 7 via email:

Dear Mr. Barlow,

**Boggabri Coal Mine: Modification 7** 

#### The proponent has provided inadequate information

Thank you for the opportunity to make a supplementary submission. We write to supplement our presentation 12 April 2019, in relation to Boggabri Coal Mine Modification 7.

The proponent has submitted an application to modify the existing NSW Approval for the Boggabri Coal Mine (PA 09-0182) known as **Boggabri Coal Mine**: **Modification 7.** 

We continue to object to this Modification 7. Overall it lacks detail and this is not adequate. We are extremely concerned about a Leard Forest Mine modification that if approved, opens the door to potential aquifer interference and impacts through:

- Introducing a new aspect to a Leard Forest mine Project Approval specifically Exploration and Drilling.
- The likelihood that if approved, the DPE will "harmonise" other Leard Mine Project Approvals by granting a similar non-exhibited, administrative change to the other mines (as has previously occurred).

Our overriding concern is the immediate and long-term viability of our existence and the groundwater on which we rely.

**Background:** All of our members are impacted by the current environmental conditions and the groundwater drawdown. Everyone in the Maules Creek Groundwater Source is negatively affected and our groundwater continues to decline. We have:

- Petitioned the Water Minister to use the Water Act 2000 to protect water levels and quality in the local groundwater aquifers.
- Requested the Department of Planning review bore monitoring and the lack of baseline data.

- Requested an explanation of the steps that have been put in place to determine whether there is any connectivity between the alluvial water source and the porous rock in the Upper Namoi Zone 11- Maules Creek Groundwater Source.
- Knowledge of at least two referrals regarding mine water impacts and use to the Natural Resource Access Regulator that will take many months to resolve.

Water sharing has come to a tipping point.

- Dol water is reviewing the four Water Sharing Plans relating to our region.
- There is no scientific certainty. Lived experience demonstrates that bore monitoring is not good enough.
- There is no rush and getting water use right is critical.

#### **Our Mod 7 concerns- Drilling and Exploration:**

- 1. Boggabri Coal Mine (BCM) does not have the right to Exploration and Drilling in its Project Approval Area in PA 09-0182 and this defines the limits of the 21 year, current PA.
- 2. Groundwater impacts beyond the current PA are material. Any additional mining will require a new approval process as noted in the Project assessment in 2010.
- 3. An extensive confidential drilling program has been ongoing for years with unknown impacts and consequences
- 4. Mod 7 material impacts have been noted but not adequately assessed in the
- 5. Environmental impacts resulting from this Modification are outside PA 09-0182 assessed impacts.
- 6. Lack of consideration in Mod 7 to new information for example since 2012 on climate impacts, including GHG emissions.
- 7. Cumulative impact: There is a risk that if approved, these administrative changes will be passed on to other Leard Forest mine projects that do not have Exploration and Drilling in the respective PAs.

# 1. Boggabri Coal Mine (BCM) does not have the right to Exploration and drilling in its Project Approval Area in PA 09-0182 and this defines the limits of the 21 year, current PA.

The absence of the right to Exploration and Drilling in the Project Approval Area in PA 09-0182 defines the limits of this 21-year PA. We reject that Exploration and Drilling is implicit in this Boggabri Coal Mine (PA 09-0182). Modifications that facilitated an increase in the intensity and duration of mining are not considered an administrative change in the view of the Maules Creek Branch of the CWA of NSW. We view the lack of Exploration and Drilling consent in PA 09-0182 as significant because it defines the limit of the PA 09-0182.

CL368 is not an exploration licence. The exploration over this area was relinquished. BCM's own documentation support where the limit to the project and its assessment lie, (see below from Boggabri Coal Minview search).



#### 1.1 Drilling program was already completed ahead of 2012 Approval.

When the extension to the Boggabri Coal Mine was approved it was our understanding that all the Exploration and Drilling for the Project PA 09-0182 had been completed as stated in Hansen and Bailey 2010, Boggabri Coal EA Main Volume Part 1, 2.2.1 Exploration, Section 2 Existing Environment, p. 6. (see below)

- "Extensive exploration drilling has continued at Boggabri Coal Mine, with numerous programs having been conducted within Boggabri Coal's Mining and Exploration leases since 1976. Drilling programs have been aimed at identifying the extent and the quantity and quality of the potential coal resource. The total number of exploration holes drilled within the mining tenements held by Boggabri Coal as at July 2009 was 510, with a total meterage of 48,517 m."
- "1980 to 1991, a total of 387 holes drilled within Coal Lease (CL) 368 and A355 of which 38 were either partly of fully cored and 10 were large diameter holes.
- "Since 1991, Boggabri Coal has drilled a further123 core drill holes to assess the coal resource including quality and quantity as part the pre feasibility and final feasibility assessment of the Project." (emphasis added)

In summary, the Exploration and Drilling prior to approval was extensive and complete, to the targeted Merriown seam depth, in the Project Approval Area.

### 1.2. Further evidence, our group notes that Exploration and Drilling are not in the Current PA 09-0182.

However, Hansen and Bailey (2010) state that seven years of mining is likely to occur to the north after the 21-year approval of PA 09-0182 ends.

 "It should be noted that there is the potential for a further seven years of mining to the north beyond the Mine Disturbance Boundary and 21 year mine limit." (Hansen and Bailey, 2010, pg.24)

In fact, this statement indicates that this Modification 7, Exploration and Drilling, may be used to explore mining to take place beyond the limit of the current approval.

- 2. Groundwater impacts beyond the current PA are material. Any additional mining will require a new approval process as noted in the Project Groundwater assessment in 2010.
  - 2.1 Australasian Groundwater and Environmental Consultants Pty Ltd (AGE) in 2010 note that "after 21 years there is a possible seven years of mining which will need another further approval in the future." (2010 Groundwater Assessment- Continuation of Boggabri Coal Mine Groundwater Assessment, p 43).

AGE also noted that for mining to the north and below the Merriown depth, further groundwater assessment was necessary. AGE considered that this was outside the current PA 09-0182.

As stated by AGE Consultants in 2010, any additional mining will require a new approval process. The exploration and drilling applied for through Modification 7 is focused on mining beyond the current location, current depth and the current 21-year mine limit using existing groundwater assessment of impacts.

For our group this Modification 7 rings alarm bells. The groundwater impacts in our region are known to us to some extent, but are as yet unknown to science: i.e.

The risks to our groundwater are being played out:

- with many depleted and/or dry farm bores.
- At the same time, the mines are searching for additional water.
- Additionally multiple ongoing Natural Resource Access Regulator investigations are underway to understand water use by at least one of the Leard Forest mines. These investigations are ongoing and unresolved.
- Regional Water Strategy is not completed or understood.
- The Independent Expert Scientific Committee advice has not been completed. (see Attachment 1, IESC Advice 1, 7, to Boggabri Coal Extension, EPBC 2009/5256, 20/12/12)
- The 2018 AGE cumulative Model and the independent review of this model are not known or available.

• A request has been put to the Department of Planning and Dol water for a study into connectivity, that Maules Creek CWA is yet to be advised has been taken up.

Any further potential undermining of the aquifers through additional un-assessed exploration and drilling must be rejected and not approved in Mod 7.

2.2 The Inadequacy of bore monitoring makes an opened-ended definition of exploration and drilling a threat to the viability of groundwater.

For the current Project Approval the limits of the bore monitoring are contained in the recommendation in Table 10, (AGE Groundwater Assessment Report. 2010, p. 48) (see below).

Table 10: SUMMARY OF RECOMMENDED ADDITIONAL MONITORING BORES					
Monitoring Site ID	Easting (m) <sup>1</sup>	Northing (m)	Target Zone for Monitoring Bore		
MB1	222941	6609729	Boggabri Volcanics		
MB2	224918	6612464	Merriown seam		
MB3	225155	6610686	Merriown seam		
MB4	226848	6612477	Merriown seam		
MB5	230994	6612988	Merriown seam		
MB6	229699	6610899	Merriown seam		
MB7	229684	6610269	Merriown seam		
MB8	229714	6609787	Merriown seam		
MB9	231468	6608167	Merriown seam		
MB10	222998	6604841	Alluvium		
MB11	220355	6608607	Alluvium		

<sup>1.</sup> Notes: Projection MGA94 Zone 56

Bore monitoring was recommended by AGE in its report for the current PA 09-0182. Note that 10 extra bores were recommended in Appendix O are to current approval limit or shallower. There are eight additional coal seams below this level. Therefore, current monitoring is inadequate to assess deeper drilling impacts in CL368 (3,544ha).

### 3. Mod 7, material impacts have been noted in the Mod 7 EA, but not adequately assessed.

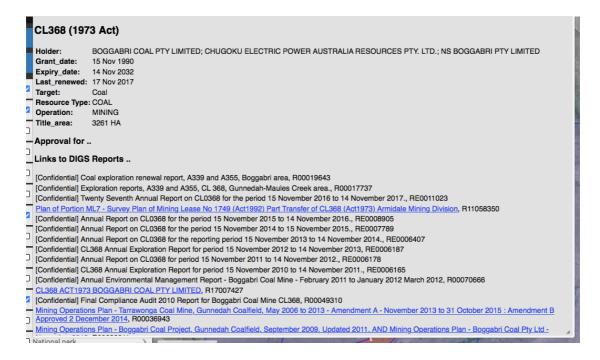
The Mod 7 Environmental Assessment fails to detail drilling and simply lists possible impacts with no assessment of these impacts. It does refer broadly to the MOP. Maules Creek CWA of NSW considers that this is insufficient for the purposes of an EA document. Details of a full impact assessment process are need for the EA. We object to an "anytime, anyplace, any depth, anywhere" styled definition of exploration and drilling and references to a constantly rewritten MOP.

This is evident in this response contained in the 2018 MOP- "If produced water is generated (however unlikely), drilling will cease until a Produced Water Management Plan is prepared...".(MOP 2018, 5.2.2, pp 60). A full assessment is

required to avoid the lack of duty of care to the environment. The response time would be inadequate. There would be considerable opportunity for environmental harm to occur.

## 4. An extensive confidential drilling program has been ongoing for years with unknown impacts and consequences

This is very concerning to our organization. Since the current 2012 Approval, an extensive drilling program has been ongoing in the Project Approval Area. We refer the IPC Commissioners to the following Boggabri Coal "Minview" extracts as evidence of activities that appear to us to have occurred outside this PA. (see below)



# 5. Environmental impacts resulting from this Modification are outside PA 09-0182 assessed impacts.

- 5.1. Impacts for this current, ongoing Exploration Program are not assessed. A risk assessment for exploration and drilling is not in the Boggabri Coal PA 09-0182 risk assessment conducted ahead of receiving approval for Boggabri Coal Mine. We believe this supports the fact that exploration and drilling came before Boggabri Extension and was not expected to occur or could be currently implicit for this PA 09-0182.
- 5.2. Further the Table 4 (Hansen and Bailey, 2010, Section 3.1, p 18) demonstrates what licences and approval BCM had at time of Project Approval.

Table 4
Boggabri Coal Licences and Approvals

Ref	Number	Approval Title	Date Granted	Authority
1.	DA 36/88	Boggabri Coal Project Development Consent	15/11/90 – 14/11/11	DOP
2	CL368	Coal Lease surface to unlimited (with surface restriction under A339)	15/11/90 – 14/11/11	I&I NSW
3	A355	Authorisation surface to unlimited	19/07/84 – 11/04/10	I&I NSW
4	A339	Authorisation surface to 20 m	11/04/84 – 10/04/11	I&I NSW

We refer you to Boggabri Coal EA Main Volume Part 1 Hansen and Bailey 2010 Executive Summary, pg.v).

Not being assessed as part of the risk assessment supports the fact that the harm and risks from these activities have not been assessed as part of the Project Approval. Despite this modification application, assessment has still not occurred. This is not satisfactory.

5.3. Further, Exploration beyond current depths was not assessed in 2010 as part of the worst-case cumulative assessment. The Boggabri Coal EA has not included the fact that this Exploration and Drilling program to the basement of the coal basin as part of its Worst case Cumulative Assessment (xvii-xviii, Executive Summary Boggabri Coal EA Main Volume Part 1 Hansen and Bailey 2010.)

### 6. New information for example since 2012 on climate impacts should be considered.

Since this mine extension was approved extreme weather conditions due to climate change have become of increased concern. The impacts of climate change mean that modelling of water impacts seem to be inadequate as our community and all mines face water shortages. The viability of our community is at risk from the inadequacies of assessment and management of Leard Forest mines including Boggabri Coal.

#### 7. Cumulative impact of Modification 7 approval

The Department of Planning (DPE) has a history of harmonizing approvals via administrative changes. The DPE reported to some of our members that it seeks to "modernize and harmonise" Leard Forest mine approvals. On this basis we object to this modification. It is likely that the DPE would grant this change to Maules Creek or other mines in the region, in the same way it has granted the removal of the community's right to be consulted on plans and strategies, achieved via non-exhibited administrative changes by Maules Creek (Mod 3) and then subsequently also granted to Boggabri Coal, amongst other PA changes achieved this way.

#### Biodiversity offset long-term security arrangements

Maules Creek CWA understand that both Maules Creek Mine and Boggabri Coal would like to mine the 500 metre wide biodiversity corridor between the two mines. This is despite the intent of Boggabri Coal's Statement of Commitment ref 23 and the PA 09-0182, Schedule 2 condition 7

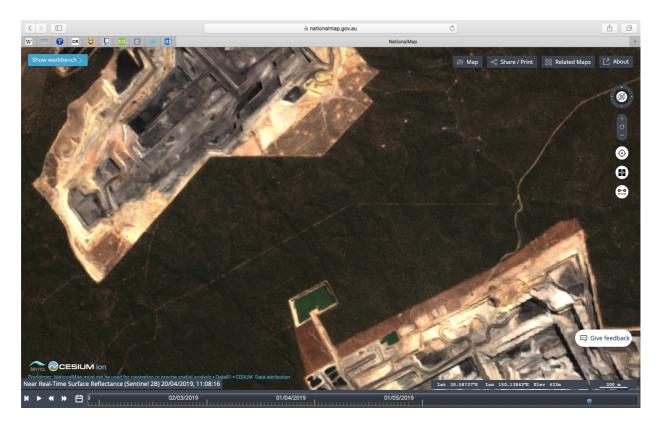
"The Proponent shall not clear native vegetation from any land within 250 metres of the adjoining Maules Creek Coal Mine mining lease boundary, except with the approval of the Secretary, following endorsement of OEH."

The biodiversity corridor between the two mines- Maules Creek and Boggabri is an critical part of the Commonwealth EPBC Approval and the regional strategy for fauna movement. It is high quality EPBC listed forest. It is part of the offset strategy along with rehabilitated areas to the south of Boggabri mine.

Nothing should undermine this corridor. No modification should be allowed to undermine the intent of retaining biodiversity in this location. We object to any intended or unintended consequences from a Modification that allows activities in a corridor that is not to be destroyed.

Mod 7 biodiversity, boundary change with Tarrawonga – definition of Project Approval Area- and drilling and exploration changes combine to allow the company to explore in the Native Vegetation Corridor. At the same time as delaying and changing the offsets measures. This clears the way for OEH (now part of Planning) to acquiesce to BCM's offset changes and then the Secretary to approve the newly proposed corridor location.

This corridor must stay in place. It is the proverbial canary in the coal mine for the health and recharge of the water at the heart of the Leard Forest. Please refer to Attachment 1, IESC Advice 2, 3, 4, 5, to Boggabri Coal Extension, EPBC 2009/5256, 20/12/12)



**Biodiversity corridor**- Post 2019 clearing Aerial view 20/4/2019 (Approx 1200m between Boggarbri Mine (bottom right) and Maules Creek Mine (top left).

#### **Transport of Coal Samples by Road**

Maules Creek Branch of the CWA of NSW recognises that additional vehicles on the road in a quiet area that is being heavily industrialised needs proper scrutiny. We cannot understand why BCM what an approval it has successfully achieved on one occasion. BCM seeks to change this Modification 7 to not inform the Councils and RMS about additional trucks and utilities on the road. This modification makes less transparency and does not make sense. We acknowledge the upper tonnage limit applied by DPE.

However, an ongoing potential breach of this Consent Condition has been self-reported to the Community Consultative Committee. 'Small samples in utes are transported regularly and technically the approval does not allow this.' Peter Forbes – Minutes, CCC Mod 7 Consultation 26/9/18).

We question why BMC opening breach such a straight-forward Consent Condition that provides greater transparency and community safety on the roads.

#### Conclusion

We ask that the IPC reject this Modification 7 Application. Our key objections to Mod 7 are that:

- As the evidence shows, most aspects of Mod 7 are not administrative, and should have been publicly exhibited.
- There is a failure to address the potentially severe groundwater impacts of the Exploration and Drilling program.
- Modification 7 should be allowed to intentionally or unintentionally undermine the intent of retaining biodiversity in this location.
- The granting of an extension to securing offsets
- Boggabri Coal has been breaching three aspects of this proposed Mod 7 –
  Drilling and Exploration activities, Transport of Coal Samples by Road and
  Biodiversity offset long term security arrangements.
- There is a failure to assess the environmental impacts.
- The EA document is inadequate.

#### **Additional Concerns**

- 1. Reject the Modification in its current form.
- 2. If approval is given for Exploration and Drilling, conditions to stop pumping of groundwater from these bores must be explicitly applied and policed.
- 3. Installation of water meters with telemetry to monitor surface and groundwater take from all pumps/bores.
- 4. Exploration and Drilling must be limited to the Project Area and exclude the Biodiversity Corridor/Native Vegetation Corridor.
- 5. Scientific certainty over environmental impacts must occur before Mod 7 is progressed.
- 6. Ahead of the modification, a risk assessment of the cumulative risks of mining and

other extractive industries to the Namoi Catchment's natural resource assets and also assess the impact of any proposed offsetting or mitigation proposals associated with mining developments.

7. No progression of this Modification in relation to Biodiversity or drilling and exploration until a full independent scientific study is conducted and reviewed and lived experience demonstrates minimal harm.

The cumulative impact of Modifications to PA 09-0182 is undermining the intent of the project our community and the people of NSW were told the company had committed to. We reject this use of administrative modifications in this context and this Modification 7. We ask that the IPC Commissioners also reject this Modification. The risks to our aquifers and environment are too great and unknown.

Yours sincerely

Libby Laird

President,

Maules Creek Branch of the Country Women's Association of NSW

Attachment 1- Independent Scientific Committee Advice, 20 December 2012, Advice to decision maker on coal mining project Proposed action: Boggabri Coal Mine extension Project (EPBC 2009/5256)



#### Advice to decision maker on coal mining project

Proposed action: Boggabri Coal Mine extension Project (EPBC 2009/5256)

Requesting agency	Department of Sustainability, Environment, Water, Population and Communities		
Date of request	29 November 2012		
Date request accepted	30 November 2012		

### Summary of request

The Department of Sustainability, Environment, Water, Population and Communities (the department) is currently assessing the proposed project in accordance with the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The department advises the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (the committee) of an opportunity to comment on the proposed decision. Specifically, the department seeks – taking into account the recent release of the *Namoi Catchment Water Study: Independent Expert Final Study Report* (July 2012) – the advice of the committee on:

- 1. Does the committee consider there will be any significant impacts on matters of national environmental significance that are dependent on water resources, including as a result of cumulative impacts?
- 2. Does the committee believe that the construction of a crossing over the Namoi River will have any impact on matters of national environmental significance?

The department requested advice be provided by 31 January 2013.

#### Advice

The committee was referred three coal mining projects proposals (Boggabri Coal Mine extension, Maules Creek (Aston 2) Coal Mine, and Tarrawonga Coal Mine extension) in the Namoi region, all affecting the Leard State Forest. This provided the opportunity to consider the cumulative impacts of these three mines. The committee offers the following advice on both the potential cumulative impacts of the three mines and the impacts of the Boggabri Coal Mine Extension project.

<u>Leard Forest Precinct Mines (Boggabri, Maules Creek and Tarrawonga) Cumulative Impacts</u>

1. The committee considers that water-related impacts of the Boggabri mine should be reviewed, as far as possible, as part of a cumulative assessment process. The Namoi

Catchment Water Study (the Study) is an essential scientific study enabling cumulative impact assessment for the Leard Forest Precinct Mines to be considered on a regional scale. A relevant scenario to the three proposals under consideration predicts drawdown in some areas of the alluvial aquifer up to 2 m. This would represent as much as a 10 per cent reduction in the average saturated thickness of the aquifer in Namoi Groundwater Management Area 4. The Study also indicates that the expected cumulative drawdown in the adjacent hard rock aquifer (Gunnedah Basin Management Area) is predicted to be in excess of 10 m, which may exacerbate the impact on the alluvium by altering the direction of groundwater flow away from the alluvium, which may impact on groundwater dependent ecosystems. The committee considers that the drawdowns outlined in the Study may be significant in terms of the ecology of groundwater dependent or influenced ecological communities.

- 2. In particular, the committee has concerns about the potential cumulative impact of groundwater drawdown as a result of the three mines and the consequent health of the remnant vegetation (the White box- Yellow box- Blakely's Red Gum Woodland community in the Leard State Forest, Leard State Conservation Area and surrounding areas). Insufficient information is presented on the intersection of the current water table, potential drawdown and the depth of the root zone of the protected ecological communities. The regulator should take the uncertainty of the mining impacts on the remnant vegetation around the mine site into consideration.
- Consideration of the relationship between drawdown and root zone depth on the these
  protected communities has prompted the committee to consider the commissioning of
  a study to review scientific literature to determine the depth of the root zone for optimal
  deep rooted native hardwoods.
- 4. On the basis of information provided to the committee, it is understood that the Leard Forest precinct mines will result in the direct removal of a large area (in excess of 3,000 ha) of the vegetation communities listed under the EPBC Act which may impact on matters of national environmental significance in the region and have implications for dryland salinity. Recognising that the ecological impact of the vegetation removal is a matter for the Regulator to consider, in relation to water matters, the committee suggests that the potential for dryland salinity be taken into consideration in the selection of any biodiversity offset areas.
- 5. Should more than one mining proposal of the three under consideration be approved, the committee recommends a collaborative approach to ongoing monitoring of quality and quantity of both surface and groundwater to validate the groundwater monitoring and provide an indication of critical impacts on threatened ecological communities. This should provide a better understanding of the cumulative impacts which could aid further regulation of development as needed.
- 6. The Namoi Water Study showed that there is the potential for the types of impacts seen in the three project proposals to occur. The committee has provided their advice separately. The committee considers the consequential effects highlighted in the Study to be quite real. To be able to properly manage cumulative impacts, the committee recommends that comprehensive baseline information on surface water and groundwater quantity and quality be collected as a priority.

#### Boggabri Coal Mine Impacts

7. The committee supports the requirement for Boggabri Coal to prepare and implement a Surface Water Management Plan and a separate Groundwater Management Plan to the satisfaction of the Director-General, as required by the New South Wales Project Approval for the extension of the Boggabri Coal Mine.

To ensure that significant impact on matters of national environmental significance that are dependent on water resources does not occur, the Committee recommends strengthening the conditions by:

a. Ensuring that the water management plans are completed and assessed as

adequate to protect matters of national environmental significance;

- b. Requiring that the water monitoring and management plans are in accordance with the National Water Quality Management Strategy;
- c. Undertaking a risk-based assessment of the disposal of mine water by irrigation on soils. The assessment should include the risk of metal and salinity accumulation in these soils. The committee recommends that the risk to Murray-Darling Basin Authority's end of valley salinity targets should also be assessed.
- 8. In relation to the impact of the construction of a crossing over the Namoi River, the committee considers that impacts will be able to be managed effectively through approval conditions. In addition, the New South Wales Project Approval for the Boggabri Coal Mine includes conditions which require Boggabri Coal to design and construct the rail spur line, rail spur support bridges and any upgrade to the haul roads so that they minimise ecological impacts from flooding. The conditions appear appropriate and adequate to protect matters of national environmental significance.
- 9. The New South Wales Project Approval includes a condition which requires Boggabri Coal to ensure that the long term landform will not generate a pit lake and that the drained water does not adversely affect the downstream environment. The committee considers that backfilling of mining voids is environmental best practice.
- 10. The ephemeral Nagero Creek appears to run through the centre of the mine pit and the upstream surface water monitoring site will no longer be viable after five years of operation. As there was no discussion of this potential creek diversion within the Environmental Assessment it was not possible to consider the risk of this aspect of the mining operation. The Water Management Plan that is required as part of the New South Wales approval conditions should however address this issue.

### Date of advice

20 December 2012