



NARRABRI MINE 3rd STAGE EXPANSION

SSD 10269

Objection to Narrabri Mine Stage 3 Expansion

The Leard Forest Research Node (LFRN) is a citizen science group based in Maules Creek which has been conducting environmental monitoring of coal mines in the Leard Forest and Pilliga East Forest since 2015.

We LFRN object to the Narrabri Mine 3rd Stage expansion.

In particular we object to the practice of Surface-to-Seam pre-degassing of coal seams which releases raw green house gases carbon dioxide CO₂ and methane CH₄ direct to the atmosphere, in a manner which precludes including them in the emissions modelling for the Narrabri coal mine.

The practice of Surface-to-Seam degassing is an alternative to “In-Seam” degassing, which entails extracting CO₂ and CH₄ out through the coal seams rather than puncturing a large number of degassing well pads connected by access roads. In-seam degassing is the more conventional method in Australia. Piping methane out and capturing it for use is a widespread technique at other underground coal mines.

Despite offering a means of capturing fugitive emissions, Whitehaven Coal has chosen not to use this technique because it takes longer. However, damage to the environment through the explosion of surface clearing and raw venting of GHGs makes Surface-to-Seam a highly unsuitable alternative.

We object to the Narrabri Mine 3rd Stage expansion entirely.

However, in addition and in the alternative we call on the consent authority to refuse consent to Whitehaven Coal to use Surface-to-Seam degassing.

Degassing of coal seams involves excessive forest clearing



Image: Pilliga East Forest on surface of Narrabri mine long walls, the North-South access roads following the location of the logwalls below surface

The fragmentation of the native forest is of particular concern to our group. The activities of Whitehaven Coal in the Pilliga East Forest involve **excessive clearing of Pilliga vegetation**.

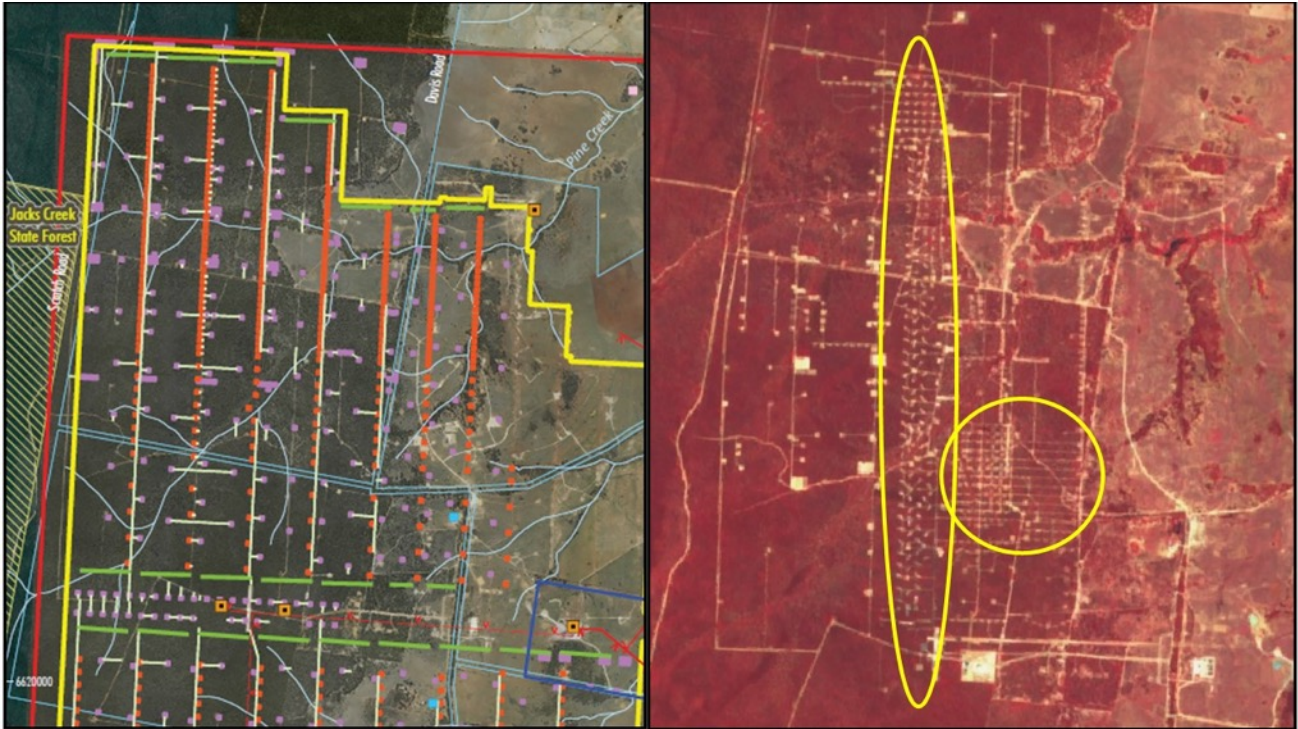
Visual investigations starting in 2017 of the Pilliga East Forest above existing and future longwall panels, particularly east of Scratch Road, uncovered the extensive removal of native vegetation for the construction of roads and well pads for the purpose of degassing.

This includes clearing of vegetation for the purposes of exploration drilling and pre-degassing as well as goaf degassing.

The extent of clearing is shocking. Not only is the approved well design excessive, but furthermore:

- Clearing greatly exceeds that which was foreshadowed in the EA.
- More infill wells are being constructed than were predicted.

Figure. The diagram below shows the indicative location of degassing well pads as shown in the 2015 Mod 5 Environmental Assessment (left) and a recent satellite image from 15th December 2020 (right).



As the right-hand image shows, the number of access roads and well pads currently constructed for degassing purposes far exceeds what was indicated in the Mod 5 EA only 5 years earlier (highlighted in yellow circles), which was itself an extensive increase on what was indicated in the original 2009 stage 2 EA.



Surface-to-seam degassing is highly polluting

Due to Whitehaven's chosen technique, the surface impacts of degassing at Narrabri Underground are extreme. They include:

- Vegetation clearing
- Fragmentation of habitat
- Pollution spills from drilling fluids and drill cuttings from the exploration wells

An example (ref(DJI_0020 16 August 2019). This pad just metres from Scratch Rd shows that Whitehaven has encroached off the actual pad and drilling residues have spread around the ground.



Close-up of above image.

See left. Drilling matter has escaped from the drill pad. Moreover it is not contained within the sump. The sump is in-ground, not above-ground.

Again, the image below shows that spray of drilling materials has spread several metres into the native vegetation to at least the width of the sump enclosure.

We question whether the disturbance area has been correctly calculated, and hence have the offsets for the disturbance been calculated

correctly. Furthermore, this sump definitely appears unlined.



Image: Vegetation around the well pad has been flattened and the drilling materials has spread several metres into the native vegetation to at least the width of the sump enclosure.

Predicted area of clearing in Hectares

The consent authority needs to soundly verify all assumptions presented by Whitehaven as to the area in Hectares which is to be disturbed, in the Narrabri Stage 2 Longwall project this is at ***Table 2.9 Indicative Areas for Disturbance for Individual Surface Facilities Required for the Longwall project*** (below).

From what we can see some of the predictions do not appear to have eventuated, eg the “goaf gas drainage site” being a mere 0.25Ha is not a credible prediction, based on what we now know.

The construction and management of the Coal Preparation Plant (CPP) is considered separately (see Section 2.5). **Table 2.9** lists the indicative areas of disturbance associated with the individual surface components of the proposed longwall mining operations. Section 2.4.9.16 further discusses the total proposed area of disturbance across the Mine Site.

Table 2.9
Indicative Areas of Disturbance for Individual Surface Facilities
Required for the Longwall Project

Component	Area (ha)
West Mains Ventilation Fan Site	5.0
Rear of Panel Ventilation Fan Sites	0.25
SIS Pre-drainage Site (Development and Production)	3.5
Goaf Gas Drainage Site	0.25
Internal Power Lines	30m wide corridor
Internal Access Roads and Service Corridors	10m wide corridor
Longwall Assembly Site	2.5
ROM Coal Storage Extension	2.2
Reject Emplacement Area	25*
Brine Storage Area	160*
Note *: This refers to the maximum area of disturbance	

Whitehaven says it might stop doing Surface-to-Seam degassing in Stage 3 of Narrabri Mine

Whitehaven Coal has made statements in the EA and to the community via the Narrabri mine Community Consultative Committee that it will consider flaring gas instead of raw venting it from the Surface-to-Seam degassing wells.

This statement made in the EA is highly doubtful and conditional on the levels of methane rising in comparison with carbon dioxide. The Stage 2 EA predicted 95% CO₂ levels at Narrabri Underground mine and this has never been refuted subsequently.

The company states methane content of coal increases above current Stage 2 levels and “opportunity for flaring” will be assessed during the Stage 3 project. Geological evidence of this has not been presented, nor evidence of how much methane there needs to be before Whitehaven Coal will consider flaring.

In any case, flaring creates its own challenges. The risks of flaring, eg fire risk, have not been assessed. If flaring is to be used as a Plan B instead of raw venting, a full environmental assessment is needed.

Venting creates about 10m³ of gas per tonne of coal. Coal production at Narrabri Underground last year was 6.5M tonnes so this equates to 65million m³ of gas. Of this about 3m³ is methane and the rest is CO₂.

As they move south they expect to get less gas, about 8m³ per tonne and it will have more methane of about 4m³ per tonne

Conclusion

The prosecution of Whitehaven Coal by the NSW Resources Regulator for breaches of its Exploration Licence is highly intertwined with its degassing activities. The access roads illegally constructed by Whitehaven were to connect well pads.

We do not detect any serious resolve from Whitehaven as to mitigating the GHG or surface impacts of the degassing processes at Narrabri Underground.

If the mine is approved to go ahead, conditions must be imposed on Whitehaven to prohibit the highly destructive Surface-to-Seam method of degassing being used in Stage 3.

Leard Forest Research Node
16th December 2020