Cadellia pentastylis

WANDO
Conservation &
Cultural Centre

VICKERY COAL MINE PROJECT

Submission of the Wando Conservation and Cultural Centre Inc, Maules Creek

Cover: The Namoi River in the vicinity of proposed Vickery Coal Mine and Coal Railway

1. INTRODUCTION

The Wando Conservation and Cultural Centre objects to the project.

We regard the Vickery Mine Extension as profoundly irresponsible, posing potentially catastrophic risks to the Namoi River, nearby and downstream. The prospect of the Blue Vale pit remaining a passive void at the end of the project, at such a close proximity to the Namoi River, is a huge concern. The Blue Vale pit, which would be used as water storage throughout the life of the pit, is predicted to leak water to the Namoi River carrying with it dissolved solids of a salinity similar to coal measure strata groundwater. The mass of dissolved solids that could migrate from the water storage would be about 14 tonnes per year.

Particularly in respect of the Groundwater Assessment, we are critical of the practice of averaging impacts over the life of the mine, and failing to disclose the worst case scenarios.

Therefore, by failing to present worst case scenarios, whether they be groundwater, noise or any other aspect of environmental impact, they average out the impacts and do not prepare the consent authority, stakeholders and the public to properly assess the risks.

We are particularly concerned that the proponent indicates it wishes to have the option of transporting coal by truck until the Vickery project reaches “full capacity”. Given that “full capacity” is defined as 10 Million Tonnes per Annum (MTPA), and that this is planned to occur in Year 12, obviously the prospect of such volumes of coal sharing the public roads between Blue Vale and Gunnedah with the general public is a very serious concern to us.

Overall, we can see that in this Project application the subject of intergenerational equity is not addressed in any material way.

We believe that the information provided about the long-term protection of biodiversity offsets is inadequate, and requires a full independent assessment and ground-truthing.

Not only will this mine deplete available agricultural land for the purpose of food production, but it will leave an ongoing cost burden on future generations to manage the ongoing environmental problems that will remain.

Numerous other issues are contained in this Submission, but ultimately the question remains one for the NSW Government. And that question is, have you not learnt anything from the Maules Creek Coal Mine?

2. GROUNDWATER ASSESSMENT

The *Australian Groundwater Modelling Guidelines* (Barnett et al., 2012) state that *"because models simplify reality, their outputs are uncertain. Model outputs presented to decision-makers should include estimates of the goodness or uncertainty of the results"*.

Overall, the Groundwater Assessment displays throughout an inadequate reference to the uncertainty of the results.

2.1 Groundwater drawdown

The EIS states that the drawdown of the Alluvial Groundwater System would be negligible.

The Coffey Partners (1982) study broadly described the regional hydrogeology of the Namoi River floodplain, upstream of Boggabri (i.e. the Upper Namoi Alluvium groundwater system). It described the groundwater system as consisting of two principal zones including an upper zone of sandy gravels which is widespread and a lower zone of sands which is confined to a deeper "paleochannel". These two zones of the alluvial groundwater system are known as the Narrabri Formation (upper zone) and Gunnedah Formation (lower zone), respectively.

According to the EA, the two formations **"are not always distinguishable"**.

Whitehaven asserts that "no privately-owned bores are predicted to experience drawdown greater than 2m" (Groundwater Assessment, p. 60) and "the drawdown of the Alluvial Groundwater System would be negligible" (Economic Assessment, p. 33).

However, these assertions are contradicted by the revelation that the two overlapping groundwater formations "are not always distinguishable".

Immediately, there springs to mind the potential of great uncertainty, should there be impacts on the groundwater in the future, such as has occurred at other Whitehaven Coal mines, Werris Creek and Maules Creek. In both of those Whitehaven mines, unresolved conflict has arisen when neighbouring farms have abruptly suffered a severe drop in bore levels.

There are two choices for the decision-maker in this situation:

1. Refuse to give approval to the Vickery Mine owing to lack of clear evidence about the two overlapping groundwater formations, and the risk of serious harm to the aquifers which is shared by other users and possibly Groundwater Dependent organisms, or

2. Approve the Vickery Mine and become embroiled in ongoing conflict and intensive (though unsuccessful) attempts at conflict resolution by Government authorities and the mine.

The Wando Conservation and Cultural Centre does not believe that the present situation in other Whitehaven Coal mines should be willingly repeated, and yet there is no indication in the EA that a similar trajectory will be averted. At Maules Creek and Werris Creek, farmer's bores and access to

their groundwater supply has been severely compromised but the Company denies responsibility for damaging the aquifers and groundwater supply. Experts are engaged, at great expense to farmers. Government authorities like Dept of Planning and the Dept of Primary Industry become embroiled in conflict resolution.

These conflicts have resulted in severe stress in affected communities, who find themselves economically impacted, with no ability to obtain a just outcome under the terms and conditions of approval. The Social Impact Assessment does not refer to the stress caused to communities by being constantly defending their rights and amenity against Whitehaven's coal mines.

Such is the experience elsewhere, the Wando Conservation and Cultural Centre is of the opinion that Vickery will be no different. Werris Creek and Maules Creek are "existing local mining operations" as described in the Social Impact Assessment (at 1.5.4) , and therefore, should be considered by the consent authority deciding on the Vickery project.

2.2 Inflows into mine pit

The Environmental Assessment discusses Groundwater inflows into the mine pit (at p. 4-26). It is predicted that "average" groundwater inflows from the Maules Creek formation would be "approximately 1.42ML/day" (ie 1.42 million litres).

However, the Groundwater Assessment (Appendix A) states at p. 42:

> "The Project inflow is expected to vary between 0.01 and 1.42 ML/day during the life of the mine."

Wando CCC conclusion: How can both the "average" and maximum inflow be equal? Obviously the EA and the Groundwater Assessment contradict eachother. **We call on Whitehaven to be required to correct the inconsistency and re-submit its inflow calculations.**

We are also of the view that an average daily inflow over the 25 years life of the mine is bound to be a very unreliable prediction, and if indeed the average is 1.42 ML/day averaged over 25 years, the daily inflow could on occasion be much, much more.

2.3 Inflows into pit unable to be verified through telemetry

Currently there is a regulatory impediment which prevents the proper monitoring of pit inflows using telemetric meters. This results in complete uncertainty over the amount of water actually entering coal mine pits. It has been a hindrance in regulating the Maules Creek mine and specific conditions need to be imposed on all mines going forward that override the legislative inadequacy that permits coal companies such as Whitehaven to maintain secrecy over their mine inflows.

2.4 "Groundwater would not be lost directly from the alluvium to the pit"

"…but there could be incidental loss through enhanced leakage from the bordering alluvium to the underlying Maules Creek formation."

The reasoning on show in the Groundwater Assessment 5.5 Predicted Groundwater Flow, suggests that there is a great deal of uncertainty about pathway of the inflows.

2.5 Blue Vale Void Water Storage

The prospect of "intermittently" storing water in the Blue Vale void is discussed at 5.7 of the Groundwater Assessment. There it is stated that at the end of the Project life, the Blue Vale pit will remain a "quiescent void". We do not agree that the final void will be "quiescent" and reject the use of this terminology.

The final void will, rather, be subject to dynamic changes in part due to the interrelationship with the alluvium and leakage would occur with the Namoi River for up to 4km. This would include the migration of "about" 14 tonnes per year of dissolved solids, those solids representing a salinity similar to the coal measure strata groundwater, which is in the range of 2,000 to 3,000 mg/L. This is clearly regarded as a trivial impact. We do not agree. The modelling suggesting the salts will only travel 4km downstream provides no comfort for two reasons:

- Dumping of 14 tonnes per year within 4km (if the Hydra-Simulations modelling can be believed) reach of the Namoi River will pose a serious and ongoing contamination burden on the locality with undoubted impacts on agriculture and native habitat.
- Notwithstanding the modelling, there is a risk that salts would travel further downstream

The Groundwater Assessment chooses to model "average effects" modelled over the entire life of the mine, so the Assessment fails to identify potential risks.

There is no way that these risks can be feasibly monitored or controlled, and the Wando Conservation and Cultural Centre has not in its 4 year existence observed any appetite on the part of the NSW Government to properly monitor, or impose effective conditions, let alone undertake punitive action for breaches of conditions.

Therefore, we do not believe that the risks of the Blue Vale void being used as a water storage pit for produced water are able to be mitigated, and the proposal to maintain such a large body of saline water so close to the Namoi River should be rejected outright.

Furthermore, given the Blue Vale void being located so close to the Namoi River and a water storage area, a risk assessment for Acid Mine Drainage must be conducted before any approval is given. The EIS states (at p.4-39) that in some occasions, acid production due to sulphur levels may occur:

"A small quantity of overburden was identified as containing increased sulfur concentrations but with low acid generating capacity. These materials are anticipated to produce acid conditions only if left exposed to the atmosphere for a number of years."

Being left for some years is what will occur upon completion of the Project. The Environmental Risk Assessment (Appendix O) states that "Seepage from the Western Emplacement to alluvial materials

adjacent to the Canyon Coal Mine final void leading to potential groundwater and surface water quality impacts" is a risk.

2.6 Cumulative impacts with Tarrawonga, Maules Creek and Boggabri mines

Previous modelling is referred to, according to which it was "reasonable to assume" that Tarrawonga, Maules Creek and Boggabri mines would not influence Vickery (Groundwater Assessment, at p. 29).

The Borefield Scenario considers the new borefield installed in the (Upper) Namoi Alluvium, assuming that "Pumping by district landowners that occurred from the Upper Namoi Alluvium groundwater system in 2010 has been assumed to continue at a constant rate." (at p. 56). We do not consider a 2010 assumption to be a reasonable assumption in the circumstances.

The new borefield brings the footprint of the Vickery project within 4km of the Tarrawonga Mine, contrary to what the Groundwater Assessment itself states. We do not believe that the cumulative impacts have been adequately assessed.

The potential cumulative impacts of four coal mines extracting a total of 35 MTPA within the relatively small region, and three Coal Handling and Processing Plants washing this quantity of coal, is being approached very lightly by the Vickery Extension EIS and Groundwater Assessment.

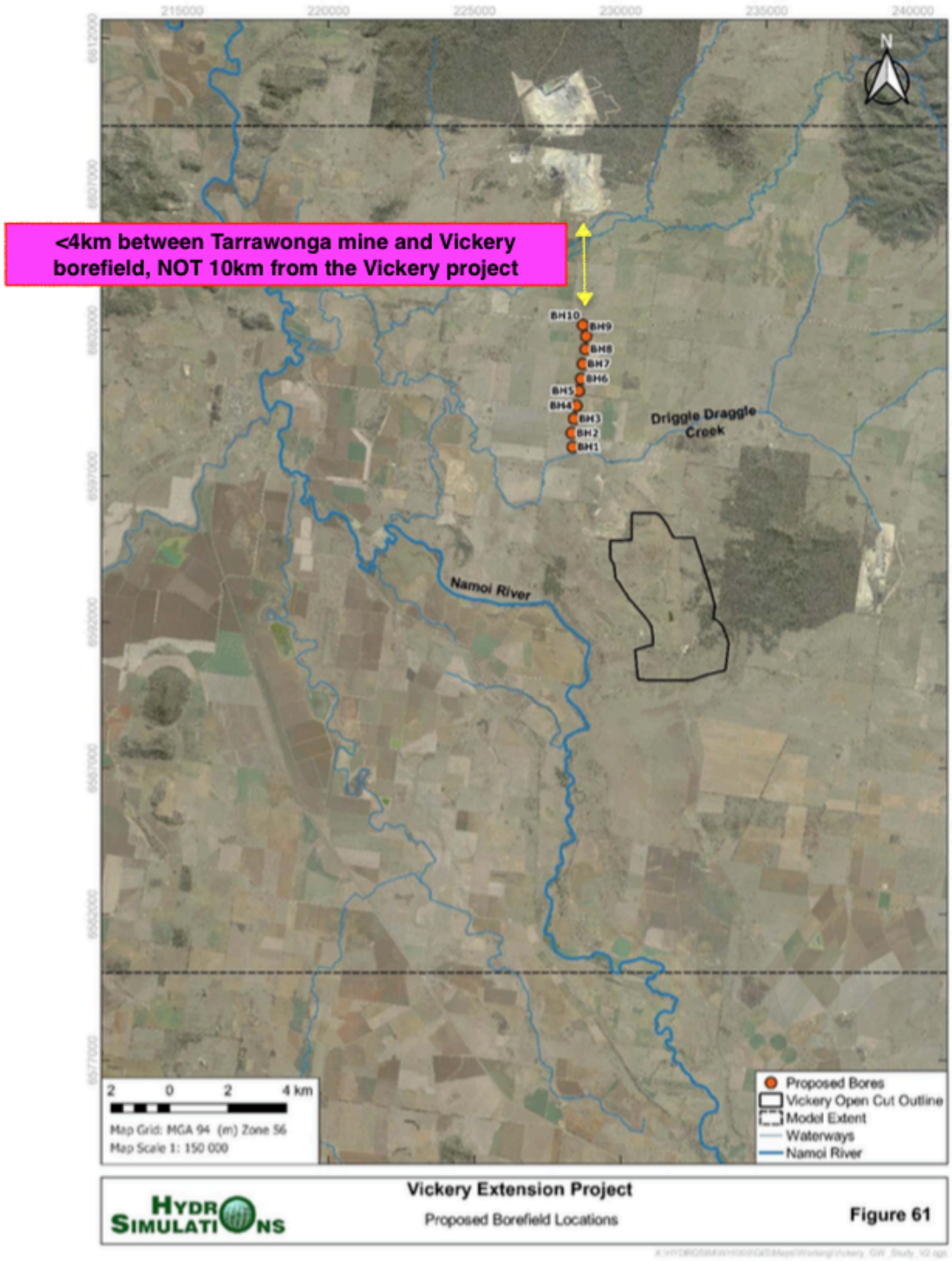
Maules Creek has current approval for 13MTPA but proposing to expand another 4 MTPA towards the North Exploration Licence A346 (with a stated determination to mine the EPBC-mandated East-West Biodiversity Corridor approximately 4 MTPA), Boggabri Coal (currently 8MTPA, and now also considering mining the EPBC-Biodiversity Corridor), Tarrawonga (4MTPA) and Vickery (10MTPA now, and further 4 MTPA in the Vickery State Forest).

In addition, there are numerous other Exploration Titles to the East of the Leard State Forest (Goonbri), North and in between Vickery and the Leard mines.

This massive mining region should be considered holistically, not in a piecemeal and fragmented manner.

This should be done before any further consideration is given to the Vickery Extension Project.

VICKERY COAL MINE SSD7480
Groundwater Assessment FIGURE 62



Vickery Extension Project
Proposed Borefield Locations
Figure 61

2.7 Post-mining final void and groundwater levels

The Groundwater Assessment states (at p. 47) that: "The contours confirm that the final void would act as a strong sink for groundwater entering from all directions."

We are horrified to learn that “equilibrium water levels would be about 125m lower than current groundwater levels at the final void”.

2.8 Conclusion on Groundwater Assessment

The conclusion of the Wando Conservation and Cultural Centre is that the groundwater risks are altogether too grave. The situation that is known to exist in the Boggabri area is well-known:

- Water modelling at Boggabri Coal was proven to be wrong and a Modification (MOD5) had to be undertaken under 2 years from the commencement of the Boggabri Extension project.
- Maules Creek mine is in serious conflict with farmers who have suffered an abrupt loss of groundwater levels of some magnitude.
- Monitoring of mine inflows is unsatisfactory, with details kept under a veil of secrecy aided by the fact that telemetric metering is not mandated by law.

3. BIODIVERSITY MATTERS

Some of the key shortcomings of the EIS are summarised below:

The assessment of impacts on landscape connectivity is the EIS does not take into account key extenuating factors such as extent of surface disturbance. It states that all the vegetation in the BAR Footprint has been modified/degraded mainly by grazing and historic clearing, however as most vegetation on private land is in some form of degraded condition, any remnant vegetation should be regarded as important, particularly as it still provides habitat for threatened species. The EIS's biometric assessment of the impact shows that all vegetation in the footprint has a high degree of connectivity in terms of patch size (>1000 ha) notably Vickery State Forest.

The EIS places little ecological importance on the derived grassland with scattered trees it acknowledges potential use of scattered trees by the Regent Honeyeater and Swift Parrot, but not by the Koala. This is despite the fact that Koalas in this environment can range widely in the landscape and commonly use scattered trees as several recent studies have shown. No account of the impact on the Koala of the removal of 500 ha of scattered trees has been dealt with in the EIS, nor any attempt to offset this loss. Other categorisations of Koala feed tree preference in the EIS are also outdated by the scientific literature.

Impacts on the Koala have also been understated because of insufficient consideration of impacts upon the full extent of suitable habitat within the Approved Mine area.
Cumulative impacts have been dealt with poorly in the EIS. There does not seem to be any limit of the extent of impact being considered and matters in relation to landscape impacts have not been considered adequately.

The EIS states that none of the native vegetation in the BAR Footprint is listed as threatened under the *Biodiversity Conservation Act 2016*. However, Vickery SF supports White Box Yellow Box Red Gum Woodland EEC and a pervious mining consultant identified this EEC during a survey for the existing approval. This has been subsequently denied by other consultants Whitehaven has used. While in a degraded state, some of the communities in the Project area may also be this community. The correspondence with Box Gum Woodland for any community within the Project and Approved Mine footprints requires an independent assessment.

Impacts on the surface water environment as a result of changes to the local hydrology particularly at the various crossings are unclear. Whitehaven's categorisation of the GDEs affected by the rail spur also warrant independent verification.

While not a listed EEC, the vegetation community NA201 is a sensitive wetland 'Mixed shrub Sedgeland' and will suffer a loss of some 4 ha. This community is an over-cleared type (>75% removed over its range) and so would warrant classification as an endangered community, given levels of ongoing threats. While Whitehaven have claimed this community has been offset, no equivalent type exists in the proposed offset areas.
Biodiversity credits which are expected to be generated for mine rehabilitation should be restricted to 50% of the benchmark value reflecting the expected outcomes.

Whitehaven's claims that all offsets can be managed need to be treated with caution, given the lack of offset finalisation for the Maules Creek Mine after five years, Whitehaven's track record on this matter is not good and should not be relied upon.

3.1 Koala impact assessment

Koalas are listed as an endangered species under NSW and Commonwealth legislation.

Koala feed trees impact has not used the latest scientific information on this topic, claiming that River Red Gums are the only primary tree. This is not considered accurate now according latest reviews by OEH and for the updated SEPP44. Many of the trees being removed in the mine and pipeline footprint (including White Box, Pilliga Box and Bimble Box) are preferred food trees for the Koala in this region. Most of the scattered trees in the footprint are of these species and would certainly be utilised by dispersing Koalas. To rely on the NSW Koala Recovery Plan as the key reference for which trees are important for the Koala is poor science as the Plan is no longer current and the current SEPP44 is being updated.

The EIS states that the Koala has not been recorded in the BAR Footprint associated with the mining area, though Koala records in the Project locality include one record within the footprint of the Project rail spur, one record within 500 m of the Project rail spur and two records within 1 km of the Project mining area (within vegetation along the Namoi River). However, a closer look at the six records depicted in the EIS show that only 3 of the 6 shown are associated with the riparian vegetation. To suggest that Koala movement is largely confined to the river as contended in the EIS does not reflect current understanding of the movement and dispersal of this species.
The overall impacts on this species have been poorly dealt with in the EIS and if taken in context with the existing approval (none of the vegetation covered by the existing approval has been removed), Koalas will see the removal of at least 80 ha of native vegetation communities containing preferred tree species and a large area of scattered trees covering over 1,780 ha over the next 25 years.

3.2 Connectivity

Assessments of connectivity are now undertaken using the biometric system, the FBA was the one in use at the time of the EIS submission. It uses a 'connectivity value score' attributed to a development site to account for any removal of any biodiversity links that may occur. The FBA defines state significant biodiversity links as:

- An area identified by the assessor as being part of a state significant biodiversity link and in a plan approved by the Chief Executive, OEH; or
- A riparian buffer 50 m either side of a 6th order stream or higher; or
- A riparian buffer 50 m around an important wetland or an estuarine area.
- The inadequacy of this approach is evident that if you consider that there are no identified 'state significant biodiversity links' in NSW (despite 10 years that this category has been present in the biometric methodology). Combined with the existing approval and the

proposed rail spur the entire area from the Namoi River to the Vickery Forest in fact will be disrupted. This is pertinent for species such as the Koala. While Koalas may be able to cross a railway line, it is not clear how the construction of this line will facilitate fauna movement.

Whitehaven will impact a number of streams with an order of 6 or higher including the Namoi River (Rail spur) and Driggle Draggle Creek (Borefield and pipeline) where 0.2 ha of riparian vegetation will be removed at each. Two fifth order streams will also be crossed by the rail spur, but it is stated that no native vegetation occurs here. Another unnamed fourth order stream with is affected by the mine development with approximately 1 km of the unnamed 4th order stream is within the NSW Assessment Footprint. This will result in approximately 4 ha of disturbance for a 40 m buffer. Together these disturbances constitute a considerable burden on the local stream ecology.
The EIS states that connectivity for the Koala habitat along the Namoi River will be retained allowing for movement. Whitehaven contend they have taken into account the impact of this sensitive area by having a quick construction time, selecting an area where the trees are sparse, making sure they don't knock over trees with Koalas in them and planting River Red Gums as an offset. However, it is still unclear just how well the finished crossing will allow Koala movement. Even if some movement under the bridge is retained along the bank there can be little doubt that the dispersal of Koalas will be severely impeded by this proposal.

The proposed groundwater borefield and pipeline would include a pipeline up to 100 mm in diameter (predominantly above ground). This is a considerable barrier to the movement of ground fauna, mainly smaller species, but also perhaps animals such as the Koala, which are unlikely to cross this barrier which could channel movement into the mine area – a disastrous outcome.

3.3 Cumulative Impacts

Cumulative Impacts have been dealt with poorly in the EIS. This has not been assisted by the fact that there are currently no cumulative impact guidelines in NSW.

Whitehaven have stated they have dealt with direct and indirect cumulative impacts. Existing or proposed mines in the region has been considered. Data from the EIS shows that if all considered together, the total of cumulative clearance of native vegetation as a result of mining activity will amount to 4,190.5 ha of wooded vegetation along with another 2,327 ha of derived native grassland and isolated trees, if the Vickery Extension Project is included.

However, Whitehaven have only dealt with cumulative impact in terms of whether or not individual projects have been offset. No assessment of cumulative impact of the loss of vegetation on the dispersal and usage of fauna at a landscape level has been attempted. Whitehaven have also tabulated the positive cumulative impact of the mine development in the region, however most of these offset lands were in fact existing prior to mining.

In particular, the combined impact of all the Approved Vickery Mine and the Extension Project will effectively severe movement of fauna on the across the area in question and substantially reduce the extent of native vegetation outside the Vickery State Forest boundary. The Approved Mine will clear approximately 1,748 ha of native vegetation (of which approximately 464 ha of woodland/forest and 1,284 ha of secondary/derived grassland). The proposed Extension will add 77.8 ha of wooded vegetation and 502 ha of derived grassland and trees to the cleared total. Apart

from an existing offset next to Vickery Forest, this is nearly all native vegetation between the forest and the Namoi River.

However, Whitehaven consider this to be minimal because of the localised nature of the Project compared to the "*wider distribution of the species (their habitats) and communities*". What geographic limit is placed on this kind of assessment in not clear.

The EIS considers the potential cumulative indirect impacts on the Vickery State Forest (from the Project and the Rocglen Coal Mine) are unlikely to materially impact fauna within the State Forest. However, the Approved Mine impacts are not mentioned and are likely to be more substantial given the close proximity of Vickery State Forest.

There is also no recognition of the fact that the Leard Mining Precinct Biodiversity Strategy extends as far as Vickery mine, and includes Vickery State Forest as well as a number of other nearby Biodiversity offsets which are offsets for the Leard State Forest, including Roseglass and a number of others. This is a major flaw, because it makes it impossible to properly assess the likely success, or otherwise, of any attempts to achieve habitat connectivity.

3.4 Aquatic Ecology /groundwater ecosystems

The EIS states that Driggle Draggle Creek, mapped as a 7th Order sStream, was found to be dry during the aquatic ecology surveys and it was determined that Driggle Draggle Creek did not have any areas that are likely to create deep pools when surface water flows through the site (Eco Logical, 2018).

But how will the altered surface flows affect the stream environment in the vicinity of the bore field and railway spur crossings? Whitehaven states that the rail spur and groundwater borefield would be designed to allow flows in the Namoi River, Driggle Draggle Creek, and other relevant watercourses, to be maintained, thereby minimising the potential impact on surface water flows and therefore having "*no material impact on terrestrial ecosystems from changes to surface water*".

Both these infrastructure proposals constitute significant surface barriers to surface flow, given Whitehaven are intending to direct flows into the relevant streams, what affect this concentrated flow would have on the surface hydrology of the streams and the floodplain area do not seem to have been addressed in the biodiversity sections of the EIS. For example, there is every chance that once flow is redirected by the mine, then surface water flows through a stream like Driggle Draggle Creek could create deep pools.

The Groundwater Dependent Ecosystems (GDE) assessment is questionable. Whitehaven have classed the Namoi River riparian woodland as not being a significant GDE because of its poor condition and because it is not listed as being an endangered community.

The riparian vegetation along the Namoi River and Stratford Creek is identified as being River Red Gum Riparian Tall Woodland (NA193). Consultants FloraSearch (2018) found the riparian woodland to have a "*low plant species richness and midstorey cover which may reflect high levels of grazing in this community and high competition from introduced groundcover species favoured by the highly*

fertile alluvial soils. *Overall, remnants of this community within the Project rail spur are considered to be in poor to moderate condition*."

The FBA methodology however does not classify plant communities this way, as they are either classified as being in a "low" or a "moderate to good" condition. Presumably some parts of this community within the railway spur footprint therefore are in a moderate to good condition for the purposes of the biometric assessment.

Despite being a degraded condition, the fact that this riparian woodland borders a regionally significant 9th Order Stream with substantial surface flows and associated alluvial groundwater system would suggest it meets the criteria as being an important GDE as per the criteria guidelines used by Whitehaven.

Impacts on alluvial groundwater systems from the construction and changes to the local hydrology associated with these crossings groundwater has been dismissed as being significant in the EIS. Whitehaven are claiming that the alluvial groundwater in the area of the Namoi River crossing is discontinuous unlike in other parts of the river. If this is true, and in fact the alluvial system here is fractured, that would mean this location is likely to be more sensitive than other parts of the river and the water flow in these conditions needs further evaluation.

Recommendation: We strongly reject the assessment that the Namoi River "is not considered to be a high value GDE" and insist this evaluation by Whitehaven be independently reviewed.

3.5 Calculation of Biodiversity Offsets

We believe there are a number of assertions in the Biodiversity Offset Strategy that call for an Independent review, notably the amount of Koala habitat that needs to be offset. The 2015 Vickery Approval as not a Controlled Action as the Koala was not Commonwealth-listed at the time. Whitehaven has asserted only 30Ha of Koala habitat, but there is 120Ha that was referred to in the original assessment but which has not been taken into account. A reason for this difference of opinion is that Whitehaven now claim some of the previously identified Koala habitat is merely derived grassland and scattered trees (Vickery Extension Project EPBC Act referral).

In addition, the calculation that only 50% of species will be re-established after 20 years does not substantiate Whitehaven's claim for full credit for the relevant BAR Footprint.

The result of running the OEH Credit Calculator is that the Project requires a Biodiversity Offset Strategy which accounts for a total of 16,401 ecosystem credits and 6,654 species credits. Impacts on the Koala are said to be 50 ha giving a credit liability of 1,308, though ignores the loss of scattered trees.

To offset this loss, Whitehaven have proposed to update their existing Biodiversity Offset Strategy for the Approved Mine, to include an ecological outcome. Whitehaven have also proposed a range of other land-based offsets as indicated in Table 46, though in fact the retirement of credits for NA185, NA324, NA201 and NA193 have not been finalised. We are re-assured by Whitehaven that suitable offsets are available, however, the Mixed Sedgeland community (NA201) does not appear

in any of the proposed offset areas where details are available. There also does not appear to be any offset for the River Red Gum (NA193).

Table 46
NSW Summary of Credit Requirements and Proposed Offset Methods#

Credit Type	Project Credit Requirements (Tables 38 and 39)	Credits Gained from Mine Rehabilitation* (Table 42)	Credits Required from Proposed Offsets			Additional credits acquired, retired, converted to the fund or supplementary measures	Offset Requirement Met
			Existing Credits in the Regional Biobank Site$ (Table 43)	Proposed Offset Areas 6, 7 and 8$ (Table 44)	Mount Somner Property$ (Table 45)		
NA185	3,540	-	-	-	-	3,540 (100%)	Yes
NA324	6,955	3, 991 (~57%)^	-	333 (~5%)	-	2,631 (~38%)	Yes
NA349	1,795	-	-	533 (~30%)	1,262 (~70%)	0	Yes
NA311	4,025	-	869 (~21%)	3,156 (~79%)	-	0	Yes
NA201	46	-	-	-	-	46 (100%)	Yes
NA193	40	-	-	-	-	40 (100%)	Yes
Ecosystem Credits	**16,401**	**3,991 (~24%)**	**869 (~5%)**	**4,022 (~25 %)**	**1,262 (~8 %)**	**6,257 (~38%)**	Yes
Regent Honeyeater Species Credits	**3,703 (due to clearance of 48.1 ha)**	-	**A**	**2,051 (~55%)**	**1,652 (~45%)**	**0**	Yes
Squirrel Glider Species Credits	**1,643 (due to clearance of 74.7 ha)**	-	**A**	**1,643 (100%)**	-	**0**	Yes
Koala Species Credits	**1,308 (due to clearance of 50.3 ha)**	-	**A**	**1,308 (100%)**	-	**0**	Yes

* There is optionality around fulfilling the offset requirement for the Project, however Whitehaven would commence the mechanism for securing the offset requirements (regardless of the offset mechanism) within 5 years of commencement of clearing native woodland/forest (or to a timeframe specified by DP&E).

$ Whitehaven-owned land.

Key to this is the generation of credits from mine rehabilitation now proposed to be made into woodland and forest, particularly plant community type NA324. The ecosystem credits generated by this component of the offset requirement is said to be about ¼ of the total ecosystem credit requirement for the project.

In order to generate so many credits for the rehabilitation, Whitehaven have assumed a maximum credit generation from the proposed works in their biometric calculations. This has been justified because Whitehaven state that:

> "Rehabilitation monitoring at the former Canyon Coal Mine, Rocglen Coal Mine and Tarrawonga Coal Mine undertaken by Eco Logical (2015; 2016; 2017a; 2017b), shows that rehabilitation of woodland in these areas is successful. Given this, Whitehaven considers it is feasible to establish woodland/forest vegetation types on the post-mine landform."

However, the studies cited do not represent any examples of mature vegetation communities.

As is clear from the photo, the rehabilitation of Rocglen overburden in particular is a laughing stock.

Pic: Rocglen rehabilitation, August 2016, shows partially vegetated mound, no trees.

Given that expected outcomes for mine rehabilitation include a total diversity of 50% of the benchmark, diversity credits gained from mine rehabilitation should be 50% to that which is being requested by Whitehaven, this information should be received with a great deal of scepticism.

3.6 Commonwealth EPBC Assessment

The original referral for the Vickery Coal Project (EPBC 2012/6263) was considered not to be a controlled action by the Commonwealth mainly because the Koala was not listed as a threatened species and because there was no EEC stated to present (even though this appears to be contentious).

The Commonwealth decision stipulated measures to be undertaken to avoid significant impacts on the Winged Peppercress (*Lepidium monoplocoides),* a listed threatened flora species but no other measures. This includes translocation of an affected population and the establishment of an offset area for this species.

Whitehaven state that the present referred action does not include the components and operations of the Vickery Coal Project (EPBC 2012/6263) but is different from the area covered by the NSW assessment because, "*… a portion of the Approved Mine (previously assessed under the*

State) is being assessed as part of the Commonwealth Assessment because it was not previously referred."

Whitehaven also state for the Koala, as it is now a listed species under the EPBC Act, has meant that the loss of habitat for this species under the Commonwealth assessment has increased from about 50 ha to 80 ha, or there was 30 ha under the previous approval which had not been referred. As no clearing has occurred in relation to the Approved Mine, this may not seem consequential, however it is not clear exactly how much of the vegetation in the existing approval in total was Koala habitat.

As the Koala was a listed species at the time of the submission of the EIS, the assessment provided for the current EIS should have included all the Koala habitat covered by the previous approval, given four communities covered by this approval support potentially suitable Koala habitat, Community 2: White Box – White Cypress Pine Shrubby Woodland; Community 3: White Box Grassy Woodland; Community 7: Silver-leaved Ironbark – White Box – White Cypress Pine Woodland; and Community 20: Poplar Box Grassy Woodland (Niche, 2012) in their ecological assessment for the Vickery Mine, estimated that potential Koala habitat in the mine area covers at least 86 ha, not including the large area of White Box Pine regeneration and semi-cleared areas (~180ha).

Another issue is that for the Winged Peppercress, Whitehaven state that it is not inside commonwealth assessment area, but the Commonwealth's conditioned consent for the Approved Mine states that some are to be translocated because they are in a mine footprint. This seems to be somewhat contradictory.

3.7 Long-term Conservation Agreements

We believe that the information provided about the long-term protection of biodiversity offsets is inadequate. The Statement of Reasons published by the Department of the Environment following the decision to make Vickery Extension a Controlled Action states that NSW National Parks and Wildlife Service "have identified the land they would like transferred into the parks estate".

We have reason to doubt the veracity of this statement and call on the Proponent to verify this statement.

Which is the land that has been identified to be transferred into the National Estate?

Figure: Extract from Dept of Environment Statement of Reasons for Vickery Extension Project

requirements in conditions 9 – 12 of the approval, or the management arrangements for those areas in conditions 17 and 18.

12. I noted the correspondence referred to in paragraphs 8(b) and (c) of these reasons, which outlined the progress that is being made in negotiations towards securing the offset properties.

    In particular, I noted that:

    a. The approval holder is proposing to secure the necessary offset areas, in part by transferring land into the NSW parks estate, with the other offset lands to be secured via conservation agreements with OEH.

    b. The NPWS have identified the land they would like transferred into the parks estate, and negotiations are continuing on suitable arrangements for transfer.

    c. Whitehaven submitted an application in July 2017 to secure the other offset lands via conservation agreements with OEH.

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    d. Advice received from DPE confirmed that negotiations are continuing and as a result of the introduction of the *Biodiversity Conservation Act 2017*, there are delays in processing conservation agreements and the application by Whitehaven will not be processed until late 2018.

3.8 Rail spur traverses Koala habitat, cannot be mitigated

At page 4-92 of the Environmental Assessment, a Footnote states that "Offset Area 5 is proposed to be modified".

An unacceptable feature is that the rail spur traverses the northern portion of Offset Area 5:

> "Due to land access constraints, rail design requirements and the objective of minimising disruption to agricultural properties, the Project rail spur traverses the northern portion of Offset Area 5 (Figure 4-20b) (part of the existing Biodiversity Offset Strategy for the Approved Mine). Whitehaven proposes that the boundary of Offset Area 5 is revised to include further habitat to the south of the approved Offset Area 5 boundary"

Although the modified Offset Area 5 is 13 ha larger than the approved Offset Area 5, evidence from locals attests to the fact that the location of the rail loop in particular is frequented by Koalas.

We do not believe that any mitigation measures, such as relocation of the local koala population can be viable because alternative habitat is being destroyed throughout NSW and in any case relocating koalas is known to have a high failure rate.

4. ROAD TRANSPORT ASSESSMENT (EIS 4.12)

The Road Transport Assessment uses survey data collected in 2012 which is outdated. It predates the establishment of the Maules Creek coal mine, the extension of the Boggabri and Tarrawonga mines.

There has not been a thorough assessment of road usage or an up-to-date road traffic audit identifying cumulative impacts.

Road transport since 2012 has grown dramatically, including mine workers, transportation of heavy plant and equipment, and increased road haulage of coal from Tarrawonga mine which gained approval subsequent to 2012. **These are not accounted for in the Vickery Road Transport Assessment.**

Since 2010, the Dept of Planning has continued to approve increases in truck movements on the Highway from 2MTPA to 3MTPA to 4MTPA, rather than building the Kamillaroi Highway overpass as promised.

We believe there should be no new coal on the Kamillaroi Highway.

4.1 Key points

- It is **based on outdated modelling**, and fails to adequately take into account changes that have occurred in associated mines since the 2012 modeling for which this assessment relies upon, ie there is **no evidence of cumulative impacts**.
- The publication of predictions for road impact in 2019 and beyond which in some cases falls short of actual survey data collected in 2015 or 2016.
- Lack of data collected specifically for this project with data rehashed from other Whitehaven modification proposals and minimal data collected since 2016 despite significant changes in road usage occurring since this time.
- The unusual discrepancies in this Assessment with two different sets of predictions published for expected traffic volumes in Year 1, 2, and 12 of the project (nominally 2019, 2020 and 2030) and conflicting or erroneous information used.

4.2 Summary of recommendations

- For Whitehaven Coal to make appropriate plans to demonstrate a commitment to making public safety and improving road safety their foremost consideration.
- To require the approved Kamilaroi overpass and private haul road to be completed as a matter of urgent priority.
- For Whitehaven CHPP to close at end of current approval of December 2022 to be replaced by local CHPP and rail out at Vickery prior to this date.
- For no coal to be transported to or from Vickery until construction of highway overpass or completion of rail loop and Vickery CHPP.

- For no repeat of a temporary increase to the current maximal coal transport such as occurred previously at Whitehaven Coal Tarrawonga Mine.
- For an urgent requirement for a thorough up to date traffic audit which identifies all cumulative mining impacts for the affected road network.
- Update modeling to accurately account for all future changes on cumulative impacts.
- Require no coal to be trucked across Kamilaroi Highway during Agquip and for one week before and afterward due to the significant, temporary increased risk on road users from increased traffic during this time.
- Clearly identify cumulative impacts from mining in transport and road demands including sale and transport of gravel and other materials, including reject materials to and from mines to be undertaken prior to approval.

4.3 Examination of data used in Road Transport Assessment

This submission further seeks to investigate some of the data used and look at expectations of Whitehaven Coal in its future road usage and impacts, specifically in relation to the dangerous Kamilaroi Highway hot spot, to:

- Highlight the unnecessary ongoing threat to the safety of road users on the Kamilaroi Highway north of Gunnedah.
- Demonstrate the cavalier attitude on Whitehaven Coal in not making any commitment to build a Kamilaroi Highway overpass and remove the transport of 3.5Mtpa of coal from the Highway.
- Question the decision of Whitehaven to ignore the requirement to make the roads a safer environment despite acknowledging that increasing traffic as a result of Whitehaven Coal's cumulative impacts does increase danger and risk on the roads.

HISTORY

The Road Transport Assessment is based on modeling developed from 2010-2012 traffic surveys. Significant changes have occurred since this time in the approval and road usage from Whitehaven Coal's other coal mines which this Road Transport assessment has failed to address.

Approvals during this time period affecting road transport impacts:

Tarrawonga

- 2010 – extract 2Mtpa until 2017
- 2013 (Jan) – extract 3Mtpa over 17 year and up to 2Mtpa by road to Whitehaven CHPP until approvals and upgrades from Tarrawonga to Boggabri CM Infrastructure.
- 2013(July) stated commercial agreement was in place for this to proceed
- 2014(Nov) approval to increase road transport from 2 to 3Mtpa due to commercial agreement not being in place (Additionally coal rejects from Whitehaven CHPP are trucked back to Tarrawonga or Rocglen).
- 2016/2017 – two year temporary increase in road transport for up to 4.0Mtpa (combined with Rocglen)

Rocglen

- 2008 extract 1.5 Mtpa for 12 years
- 2011 (Sept) additional 4 years and continue 1.5 Mtpa
- 2014(Nov) road haul modified to reflect cumulative impacts from Tarrawonga and Vickery (Additionally coal rejects from Whitehaven CHPP are trucked back to Tarrawonga or Rocglen).
- 2016/2017 – two year temporary increase in road transport for up to 4.0Mtpa (combined with Tarrawonga)

Maules Creek

- 2012 Maules Creek Mine commences ramping up to 13Mtpa by 2020 with corresponding increase in heavy and light vehicle traffic
- 2016 Mod 3 (approved) Allows for increase of light vehicle traffic to and from mine by over 500% above existing approval conditions

The consequence of these changes is that basing future transport figures on out of date or incomplete modeling fails to adequately address the traffic impacts.

Former traffic surveys are outdated and need to be reexamined for current conditions and to take into account the cumulative impacts of the mines listed below to account for the many recent changes in approval and conditions.

Shared transport Route – Vickery Mine, Tarrawonga Mine, Rocglen Mine, Sunnyside Mine.
Public road impacts from; Vickery, Tarrawonga, Rocglen, Boggabri, Narrabri Underground and Maules Creek mines. Sunnyside (Canyon Coal – currently closed)

Relevant Approved Mining Operations

- ROM coal to Whitehaven CHPP
- Transport reject material from Whitehaven CHPP to Whitehaven mines

2.1 Rocglen 1.5Mtpa till Dec 2022 (coal reject back to Rocglen for disposal)
2.2 Tarrawonga up to approx. 3Mtpa until 2030 (coal reject back to Tarrawonga for disposal)
2.3 Boggabri (Idemitsu Australia) – 8.6Mtpa until 2033 (includes constructed permanent mine access from Kamilaroi Highway)
2.4 Maules Creek – up to approx. 13Mtpa until 2034
2.5 Sunnyside – up to approx. 1Mtpa until end of 2020
2.6 Vickery up to approx. 10Mtpa over mine life (approx. 25yrs)

Road Transport Assessment prepared in 2012 (GTA Consultants)
-Vehicle access via Blue Vale Road
- Construction of approx. 1km long private haul road including overpass over Kamilaroi Hwy prior to exceeding 3.5Mtpa.
- Transport max 3.5Mtpa (4.5Mtpa with overpass) to Whitehaven CHPP (coal reject back to Vickery)
- Extraction of up to 90,000 cubic metres of gavel from site for collect by customers using Approved road transport Route from Gunnedah or via Kamilaroi Hwy, Rangari Road and Approved Road transport route from Boggabri and surrounds.

2.7 Whitehaven CHPP and Train Load-out
Approved to process up ot 3Mtpa ROM coal until October 2022. Train load out approved to handle up to 4.1 MTpa of product coal.

3.6.1 Continued Transport to the Whitehaven CHPP

RECOMMENDATION 1: Any Coal transported from Vickery only be permitted subject to Hwy overpass and private haul road being in operation.
RECOMMENDATION 2: That no ROM Coal be transported to Whitehaven CHPP from Vickery (or other mines) beyond current Whitehaven CHPP approval (Oct 2022). And that Whitehaven CHPP cease to operate beyond this date.
RECOMMENDATION 3: From this date that all coal currently processed at Whitehaven CHPP be processed at Vickery and transported by Train Load-out from this location.

This takes heavy vehicle traffic off the roads as soon as possible and in particular the crossing of the Kamilaroi highway to the Whitehaven CHPP in an area under increasing stress and increasing traffic loads (both light and heavy vehicles)

3.7 Road Transport Assessment
Year 1 – (2019) – construction only – 500 personnel
Year 2 – (2020) Mining 1Mtpa – current Approved Transport Route
Year 12 – (2030) 10Mtpa rail transport, maximal operation. Railed coal up to approx. 11.5Mtpa – Including 1.5Mtpa Tarrawonga – 450 full-time on-site personnel (24hrs 7days/week)

RECOMMENDATION 4: Recommend that a commitment needs to be made to building Highway overpass and private haul road as a matter of priority during year 1 (or year 0). This needs to be a condition of coal being transported from Vickery Coal Mine.

4.1 Road Network
Kamilaroi Highway – Intersection with Rangari Road
Kamilaroi Highway – Intersection with Blue Vale Road

"If construction the approved private haul road…" –

RECOMMENDATION 5: Recommend that the construction of private haul road and highway overpass needs to be made conditional upon any coal being hauled from Vickery to Whitehaven CHPP. Otherwise no coal should be transported until completion of rail spur and Vickery CHPP.

4.4 Serious discrepancies in data

The unusual discrepancies in this Assessment with two different sets of predictions published for expected traffic volumes in Year 1, 2, and 12 of the project (nominally 2019, 2020 and 2030) and conflicting or erroneous information used.

4.2 Traffic Surveys

Two pieces of traffic data which relate to the connection or Rangari Road and Blue Vale Road to the Kamilaroi Highway are focused on here and data from actual surveys as well as modelled volumes are tabled below.

Points to note:
I – Kamilaroi Highway South Rangari Road

- Daily Heavy vehicle traffic predictions are all below (by between 117 & 169 movements per day) the actual heavy vehicle traffic movements surveyed in 2015. This is an under prediction of over 30%.
- Peak hourly heavy vehicle volumes are predicted to drop in 2019 & 2020 before increasing by 100% by 2030 compared to actual 2015 data.
- Peak hourly light vehicle volumes are predicted to increase by up to 250% compared to 2015(532 light vehicle movements versus 153)

G – Kamilaroi Highway South-East of Blue Vale Road

- Daily Light vehicle traffic predictions for 2019 & 2020 are below (by between 298 & 410 movements per day) the actual Light vehicle traffic movements surveyed in 2015. This is an under prediction of up to 16%.
- Peak hourly heavy vehicle volumes predicted to increase by up to 260% by 2030 compared to actual 2016 data.
- Peak hourly light vehicle volumes predicted to increase by up to 76% compared to 2016(257 light vehicle movements versus 146)

RECOMMENDATION 6: Recommend that new traffic survey data needs to undertaken and new modeling needs made that will provide an accurate reflection of current traffic volume and expected future volumes taking into account cumulative impacts from all coal mines and the changing approval conditions.

Majority of available data Nov-Dec 2010. Two surveys Feb 2011. Three Oct-Nov 2011. Additional 2015 & 2016. Composition of traffic Light & Heavy.
Table 4.1

- Heaviest traffic 6am-7am, & 6pm-7pm. Times mining and related activity expected to generate highest traffic volumes.
- 2016 data overlap with week of AgQuip (days close to but not including AgQuip) which increases traffic in local region. Hourly volume moderately impacted and daily significant impact.

RECOMMENDATION 7: Recommend that as it is acknowledged hourly and daily traffic volumes increase significantly during AgQuip that this constitutes a time where business as usual in relation to heavy vehicle (coal transport) poses an unacceptable risk to public safety and as a proactive measure Whitehaven Coal should ensure no coal is hauled to Whitehaven CCHP during AgQuip and for one week before and after this event.

Table 1: Summary of Data from traffic surveys and two sets of predicted modeling (Adapted from Tables 4.1, 5.7 and 9.1 in *Appendix I – Road Transport Assessment*
Information where a comparison can be made to previous period
(Note 2010-11 is considered baseline data – prior to beginning of Maules Creek Coal Mine)

I – Kamilaroi Hwy Sth Rangari Road

	Daily	Light	Heavy	AM Peak (L/H)		PM Peak (L/H)	
2011	1613	416	80	15		95	18
2015	2129	666	153	33		115	28
% change	32%	60%	91%	120%		21%	56%

Prediction – from 5.7 Baseline Future Traffic Volumes

2019(pred)	2465	497	222	28	203	26
2020(pred)	2472	501	214	28	198	26
2030(pred)	2686	541	532	60	219	28

Prediction - from 9.1 Future Traffic Volumes

2019(pred)	3017	505	439	28	421	26
2020(pred)	2442	499	205	28	185	26
2030(pred)	2766	549	536	62	226	30

G – Kamilaroi Hwy Sth-East of Blue Vale Road

	Daily	Light	Heavy	AM Peak (L/H)		PM Peak (L/H)	
2011	2223	1065	83	28		120	52
2016	2997	1188	138	31		146	56
% change	35%	12%	66%	11%		22%	8%

Prediction – from 5.7 Baseline Future Traffic Volumes)

2019(pred)	2689	1476	163	53	197	77
2020(pred)	2695	1484	147	53	179	77
2030(pred)	3105	2136	219	113	226	116

Prediction - from 9.1 Future Traffic Volumes

2019(pred)	2699	1524	134	52	172	77
2020(pred)	2587	1472	121	52	150	77
2030(pred)	3423	1020	238	40	257	46

<u>RECOMMENDATION 8:</u> Recommend in light of percentage changes of more than 30% in daily traffic in 4-5 years and peak hourly volumes increasing by up to 120% on measured volumes an urgent requirement to conduct a comprehensive up-to-date traffic survey which accounts for cumulative impacts from all regional mining operations.

<u>RECOMMENDATION 9:</u> Recommend, in light of large discrepencies between the two sets of models (based on 2010-11) baseline and large variances to actually survey data, that a new set of modeling must be undertaken based on a comprehensive, up-to-date survey which accounts for cumulative impacts from all regional mining operations.

4.3 Road Safety

Data from 1 Jan 2011 to 31 Dec 2015. – Has not looked at data during time of temporary hauling increase 2016-2017 or since approval of transport for Maules Creek Coal Mine to increase light vehicle transport since late 2016.

RECOMMENDATION 10: Recommend road safety data needs to be collected and investigated to current time to include 2016-2018 information.

5 Baseline Future Traffic Conditions
Traffic Survey data from 2010-2011 used for development of future conditions.
5.1 Approved traffic conditions in absence of project assuming overpass not completed Modified from 4.5Mtpa – 24hrs per day to actual approval conditions.
All traffic from Vickery mine in addition to predicted conditions.

RECOMMENDATION 11: Recommend a comprehensive, up-to-date traffic survey to be conducted which accounts for cumulative impacts from all regional mining operations.

5.1.1 Approved mine 2019 Traffic (500 personnel) /2020(124 personnel) /2030 (450 personnel)
2020 – assumed max 3.5Mtpa to Whitehaven CHPP (1.45Mtpa from Vickery)
2030 – assume 3.5Mtpa to Whitehaven CHPP (assume no overpass)
- The transport route (excepting Manilla) is on approved route to Kamilaroi Hwy via Blue Vale or Rangari Rd

	Daily	Light	Heavy	AM Peak (L/H)	PM Peak (L/H)	
2019	332	20	105	1	100	0
2020	296	628	70	41	62	40
2030	594	712	140	43	125	40

Table 6.3 (Total Project Traffic)

Daily	Light	Heavy	AM Peak (L/H)	PM Peak (L/H)	
2019	918	84	300	0	300	0 (variance with 5.1.1)
2020	134	614	26	40	12	40

7.3 Yr 2 Assumes 3.5Mtpa ROM coal hauled via overpass and haul road from Vickery

2030	1072	72	169	6	169	6

8.4 Year 12 Assumes coal railed from site

Expected additional mine traffic
G – Kamilaroi Hwy Blue Vale Road

	Daily	Light	Heavy	AM Peak (L/H)	PM Peak (L/H)	
2019	202	18	59	1	55	0
2020	186	626	41	41	35	40
2030	374	648	82	43	70	40

I – Kamilaroi Hwy –Rangari Rd

	Daily	Light	Heavy	AM Peak (L/H)	PM Peak (L/H)	
2019	106	2	36	0	36	0
2020	92	2	23	0	23	0
2030	182	64	47	0	44	0

Table 5.22 Indicative Average Weekday Midblock (without project)

This table demonstrates that the section of Kamilaroi Hwy subject to Coal haul trucks is subject to road congestion when considered what is occurring in this area. Coal trucks turn left, accelerate, change lanes and turn right (both north bound and south bound at a combined rate in peak times estimated at 80 times per hour or once every 45seconds.

These figures are without the project. The authors summarise to say "… drivers would be expected to experience good levels of service…"
At times in a given direction there can be up to three of these loaded two trailer coal trucks. One braking and turning right, another accelerating in the main lane and a third attempting to merge following its braking to turn left onto the Highway.

RECOMMENDATION 12: Recommend that to eliminate the ongoing safety risk associated with these coal truck the private haul road and highway overpass needs to be constructed as a matter of urgency before road transportation commences in relation to the Vickery mine and proposed new CHPP.

3.5Mtpa = 612 heavy vehicle trips per weekday (306 loaded – 306 return)

7.3 Yr 2 Assumes 3.5Mtpa ROM coal hauled via overpass and haul road from Vickery but also that 3.5Mtpa ROM coal is hauled via approved route from Tarrawonga and Rocglen mines

8.1 Year 12 assumes 3.0Mtpa ROM coal hauled on Approved Road Transport Route from Tarrawonga mine in addition to 10Mtpa ROM coal railed from Vickery mine.

These assumptions not only are contrary to current approval conditions but also show a blatant disregard to public safety on roads in the mining precinct.

RECOMMENDATION 13: Recommend that the Whitehaven CCHP not be extended beyond its current approval timeframe and that all coal from the mines using this haul route be required to have all coal processed and railed out from Vickery CCHP and rail loop. This would demonstrate a commitment to improved safety on public roads.

"9.4 Road Safety Implications
The increase in traffic expected to occur on the road network as a result of changes directly associated with the Project, and unrelated to the Project would typically result in an increase in exposure to crashes, with a corresponding increase in the number of crashes.
The review of historic crashes in the region (Section 4.3) did not highlight any particular causation factors on the Approved Road Transport Route or Rangari Road, thus the Project traffic is not expected to exacerbate any specific safety concerns at any particular location"

As stated in the first paragraph increasing road traffic increases risk. In a safety first proactive attitude the mine should adopt the principle of minimizing risk at all times.

RECOMMENDATION 14: Recommend that Whitehaven Coal be required to minimize or improve safety on public roads. Firstly by eliminating heavy vehicle traffic from roads, particularly the

junction with the Kamilaroi Highway by building highway overpass and private haul road. Secondly by organising for bus transport during the construction phase (where 90% of constructions workers are assumed to be housed in the Boggabri village camp) and during future mine operations where large numbers of workers come onto shift at the same time.

9.14 Consideration of NSW Government Transport Policy
"…provides a safer road transport system…"
"The project is not expected to exacerbate any specific safety concerns at any particular locations."

"It is concluded that no specific measures or upgrades to mitigate the impacts of development on the capacity, safety and efficiency of the road network would be required as a result of the changed road traffic conditions associated with the project."

Obviously from the above analysis, the "no specific measures" approach that the Road Transport Assessment contains is inadequate.

Cumulative impacts have had and continue to have a significant impact on the region. In particular not addressing the issue of the coal hauling across the Kamilaroi Highway in conjuction with continued increases in light vehicle transport throughout the region.

RECOMMENDATION 15: Recommend that the cumulative impacts of all the mining projects needs to be addressed. Whitehaven Coal need to provide concrete measures to provide a safer road transport system in the region where mining and mine associated traffic is having a demonstrated major impact on road safety.

RECOMMENDATION 16: Recommend that issues of cumulative impacts from all mine and mine related traffic be addressed through a comprehensive, up-to-date traffic survey where Whitehaven Coal introduces concrete measures to provide a safer road transport system.

RECOMMENDATION 17: Recommend that a private haul road and highway overpass be built prior to any work commencing on the Vickery Coal Mine to remove coal haulage trucks off the Kamilaroi Highway.

4.5 Whitehaven seeks permission to haul by road until "full capacity"

The Project Description "Continued Road Transport to the Whitehaven CHPP" (at p.20) states that:

1. At **full capacity,** the Project would extract up to approximately 10 MTPA of ROM coal.
2. The maximum ROM coal mining rate (i.e. up to approximately 10 MTPA) has been assumed to occur during Year 12.
3. Until the Project CHPP, train load-out facility and rail spur are operating at **full capacity**, Whitehaven can truck coal by road from this project (and other Whitehaven mines) to the Gunnedah CHPP.

When you add these 3 statements together, Whitehaven is stating that they may continue to truck coal by road from this project (and other Whitehaven mines) to the Gunnedah CHPP up until Year

12 of the project. Again we emphasise the need for the Whitehaven CHPP at Gunnedah to close at the end of the current approval of December 2022 and to be replaced by the local CHPP and rail out at Vickery prior to this date. And for no coal to be transported to or from Vickery until construction of either a highway overpass or the completion of rail loop and Vickery CHPP.

4.6 Continuation of present curfew

Currently, a curfew exists against road haulage during certain night-time hours. We were unable to find mention of this in the Road Transport Assessment.

Recommendation: the issue of the night-time curfew requires disclosure and clarification.

5. RAILWAY

5.1 Undisclosed additional rail spur should be considered

There is a rail spur referred to as the Third Rail Corridor and described in the Vickery Extension Project Referral EPBC referral: see Rail Spur from 26a. Appendix F from the Vickery Extension

Subsequent to the lodgement of the Vickery Extension Project Referral and Controlled Action decision, Whitehaven has undertaken detailed design of the rail spur and determined that, based on operational cost forecasts, landholder restrictions and ecological considerations (i.e. the Boggabri Coal Mine biodiversity offset area), a third rail spur corridor, not described in the Vickery Extension Project Referral, is the preferred route:
http://epbcnotices.environment.gov.au/_entity/annotation/e7f8de29-1dd1-e511-a6f0-005056ba00a7/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1455844511954

The Action would include the construction and operation of train load-out facilities and rail spur and loop. The rail spur and loop would connect to either the Maules Creek Mine and Boggabri Coal Mine spur (northern rail investigation corridor) or the Werris Creek Mungindi Railway (western rail investigation corridor). The indicative rail investigation corridors are shown on Figure 3. The final alignment and connection point to the existing rail network would be subject to further detailed design and finalisation of commercial arrangements.

5.2 Cumulative impacts of additional rail spur

Wando Conservation and Cultural Centre understands that it within the power and authority of the Consent Authority to consider any factors it chooses, whether they have been specifically raised in the EIS or not. Therefore, it is our submission that additional railway lines have the potential to add considerably to:

- Flood risk
- Biodiversity loss
- Loss of access and amenity for landholders needing to traverse the region

Given that the proponent has already failed to provide modelling of the flood risks of the railway, the notion that they already envisage a further rail spur, which was already discussed with the

Commonwealth yet is not disclosed is a clear signal of intention to apply “Approval Creep” and to seek a modification within a relatively short time-frame if Vickery Extension were to be approved.

5.3 Insufficient detail to support approval

In appendix C - flood assessment (at p 38) of the EIS states: *“The final vertical alignment of the rail and sizing of the openings (bridges and culverts) will be determined during the detailed design stage.”*

The Maules Creek is a case study of the problems that arise when a heavy industrial project such as here a railway, and at Maules Creek the CHPP, are approved on the basis of a preliminary design and without the benefit of a detailed design upon which to base risk assessment. In the case of the Maules Creek CHPP, the noise modelling was based on a preliminary design and subsequently changed. The Maules Creek community has since endured 5 years of noise pollution and conflict with the Whitehaven Company in attempts to prevent the company from inflicting offensive noise. This is well-documented in public submissions, and submissions from organisations, contesting the Maules Creek Noise Modification MOD4 (which was withdrawn by the company).

The information within this “detailed design stage” needs to be in this EIS so an accurate and informed submission can be made.

6. INDIGENOUS CULTURE

We have consulted the Red Chief Local Aboriginal Land Council to ascertain whether the Traditional Custodians are satisfied with the level of consultation in relation to the Vickery Extension Project. We have also acquainted ourselves with the Submissions made by Gomeroi Traditional Custodians against the 2015 Vickery Approval. We are satisfied that Indigenous Culture has not been adequately considered.

Whitehaven continually ignore their responsibilities in relation to cultural heritage as it is set out in the Burra Charter and the Policies relating to Aboriginal Cultural Heritage Valuations set out by the Office of Environment and Heritage.

There has been a lack of any consultation with the First Nation’s People’s Knowledge Holders, within the Red Chief Local Aboriginal Land Council boundaries. Consulting with Registered Aboriginal Parties is not enough.

7. LIGHT POLLUTION A CONCERN FOR SCIENTIFIC COMMUNITY

Light pollution is a concern not only for people who live in the area, but also for the space science communities of Coonabarabran and Siding Springs, which is a World Class centre of excellence in this field. Fears about light pollution have been in existence since the approval of the Maules Creek mine. Light pollution has never been actively managed, leading to multiple complaints from as far as 18km away when the intense beams of light can cause disturbance.

Here are recent pictures taken from "Kumbogie" property, 18km north of Maules Creek mine, in August 2018.

The light pollution is not only relevant for scientists and residents, but also for nocturnal animals.

At p. 4-92 of the EIS, Whitehaven states that "Measures that would be employed to mitigate potential impacts from night-lighting, including (where practicable), the use of directional lighting techniques and implementation of light shrouds and reflectors to limit the spill of lighting."
The term "where practicable" has become known as a meaningless standard of performance.

It's clear from experience that light pollution is not regulated at all by the Department of Planning, and in such a situation of regulatory neglect, promises of mitigation of the problem are not credible.

The Company has disclosed that it will have 11 light plants in Yr 2 and 15 light plants for Years 7, 17 and 26 at 104 LAeq (dBA) each. That is in addition to the orange lights of the conveyor. The same Table of Indicative Sound Power Levels in the 2018 EIS (p. 31 of Appendix 4 - Noise and Blasting Assessment) does not mention any light plants. Therefore, we believe the predictions about lighting are unreliable.

We call on the Department of Planning to require the Company to make corrections to its EIS to establish exactly what lighting is proposed and what it regards as the standard referred to as "practicable".

8. INSUFFICIENT TIME TO MAKE FULL SUBMISSION

Due to the complexity of the Vickery Extension Project, and the fact that it includes a CHPP and railway, the proximity to water and the potential affectation of the Namoi River and groundwater, as well as a wide range of other concerns, it has been impossible for Wando CCC to complete a full and comprehensive Submission.

Statements made by the Company to some stakeholders, alluding to a "well-understood" project are quite false and misleading, as the Submissions of other community members will no doubt reveal.

9. REPUTATION OF THE PROPONENT

9.1 CEO not a "fit and proper person"

The Chief Executive officer of Whitehaven Coal, Mr Paul Flynn, does not have the "character, honesty and integrity" to satisfy s 83(g) "fit and proper person" test of the *Protection of the Environment Operations Act*. Here is the relevant legislation:

> **45 Matters to be taken into consideration in licensing functions**
> In exercising its functions under this Chapter, the appropriate regulatory authority is required to take into consideration such of the following matters as are of relevance:
> ...
> (f) whether the person concerned is a fit and proper person,

Note.
See section 83 for provisions relating to the determination of whether a person is a fit and proper person for the purposes of this section.

83 Fit and proper persons
...
(g) if the person is a body corporate, whether, in the opinion of the appropriate regulatory authority, a director or other person concerned in the management of the body corporate is of good repute, having regard to character, honesty and integrity,

At the company's 2017 Annual General meeting the CEO responded to questions about the Maules Creek high-risk rating, telling shareholders that the Level 3 risk rating was the result of complaints from just one nearby landowner who wanted more for his land, which was an untruth. The Level 3 risk rating was due to a history of noise exceedances and pollution problems. The CEO's statement was false, and has been denied by the NSW EPA.

This makes the CEO not a "fit and proper person" within the definition of the *Protection of the Environment Operations Act 1997* to hold an Environmental Protection Licence as a Director of Whitehaven Coal, of which Maules Creek Coal Pty Ltd is a subsidiary.

As a result of being unfit to hold an Environmental protection Licence, Whitehaven Coal should not be granted approval for the Vickery Coal Mine Extension.

9.2 Change of Proponent Name to Meet SEARS Requirements

The Secretary's Environmental Assessment Requirements (SEARS) have been modified a number of times during the long duration since the original approval was given. We note one particular change that corresponds with the following chain of events. In all SEARS modifications up until the most recent one (19th July 2018), the proponent's name is Whitehaven Coal Limited.

ASIC
Australian Securities & Investments Commission

Australian Company

VICKERY COAL PTY LTD
ACN 626 224 495

Extracted from ASIC's database at AEST 13:32:56 on 23/10/2018

Company Summary	
Name:	VICKERY COAL PTY LTD
ACN:	626 224 495
ABN:	74 626 224 495
Registration Date:	17/05/2018
Next Review Date:	17/05/2019
Status:	Registered
Type:	Australian Proprietary Company, Limited By Shares
Locality of Registered Office:	SYDNEY NSW 2000
Regulator:	Australian Securities & Investments Commission

Further information relating to this organisation may be purchased from ASIC.

In the Revised SEARS provided by Whitehaven to the Department dated 19th July 2018 it lists the proponent as Vickery Coal Pty Ltd.

An ASIC search (above) shows that this entity Vickery Coal Pty Ltd was formed on 17th May 2018.

This allows Whitehaven to deceive the Commonwealth Government and the community by stating in the EIS in section 6.1.2 that the proponent has no environmental breaches or proceedings against them.

The Supplementary SEARS - Commonwealth Requirements were issued sometime between March and July 2018 (no date included). It includes a requirement by the Commonwealth Government to declare the Environmental Record of the person taking the action section as pictured here:

Figure: Extract from Referral to Commonwealth

7 Environmental record of the responsible party

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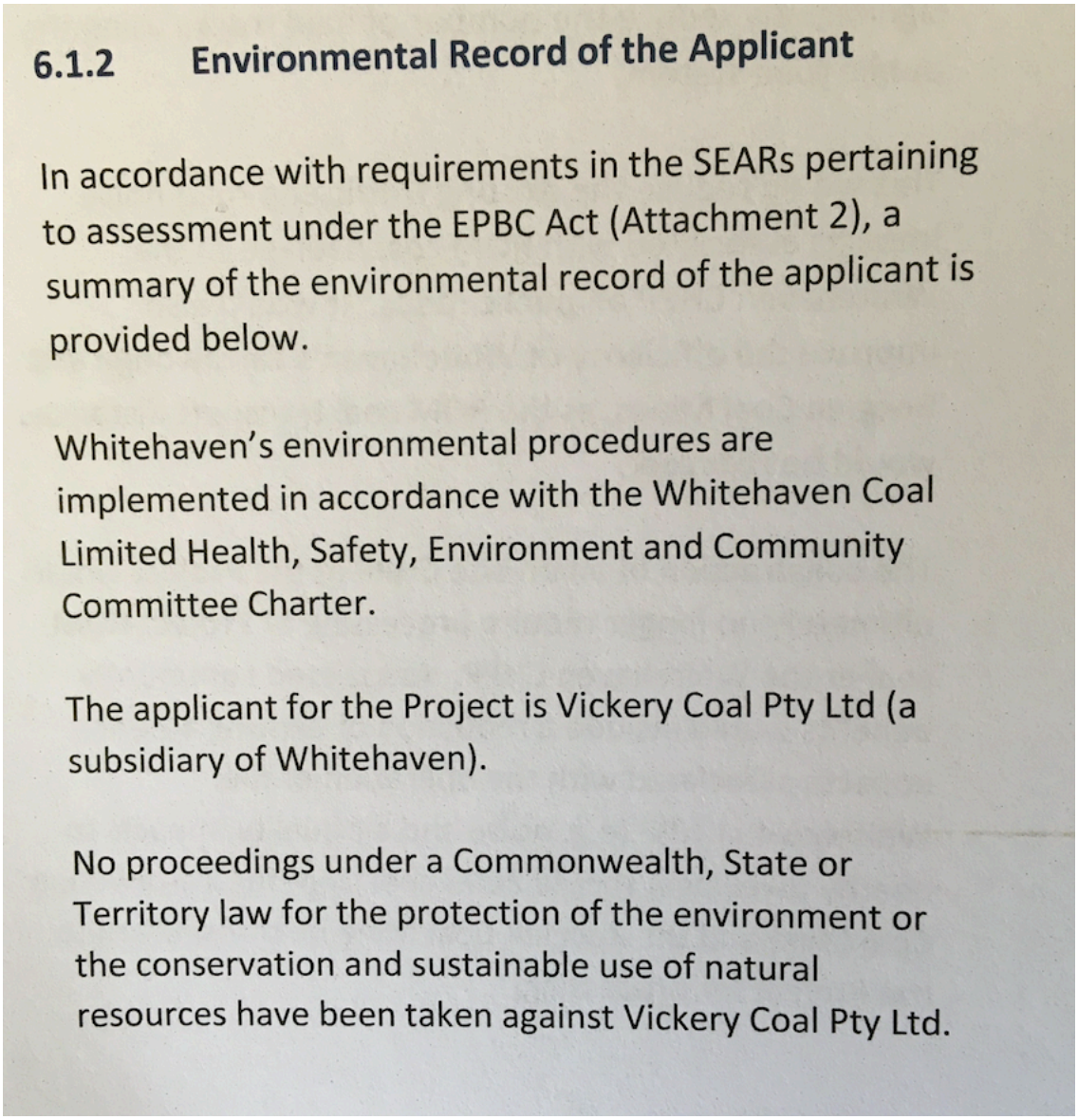
7.1	**Does the party taking the action have a satisfactory record of responsible environmental management?** **Provide details** Whitehaven has a strong record in mine safety, environmental care and business operation. Whitehaven conducts its mining operations in accordance with a range of regulatory consents, leases and licences. After years of mining in the Northern Inland Region Whitehaven has established and is committed to continue open and constructive dialogue with the local community and stakeholders.	✓

This was the detailed answer provided:



6.1.2 Environmental Record of the Applicant

In accordance with requirements in the SEARs pertaining to assessment under the EPBC Act (Attachment 2), a summary of the environmental record of the applicant is provided below.

Whitehaven's environmental procedures are implemented in accordance with the Whitehaven Coal Limited Health, Safety, Environment and Community Committee Charter.

The applicant for the Project is Vickery Coal Pty Ltd (a subsidiary of Whitehaven).

No proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources have been taken against Vickery Coal Pty Ltd.

However, this change of name does not change the fact that the Chairman and the Chief Executive Officer of the entities are the same individuals responsible for previous poor environmental performance at the Maules Creek coal mine and Gunnedah CHPP.

Vickery Coal might have "No proceedings for the protection of the environment", but related entities most definitely have proceedings against them by the NSW EPA, including:

- Maules Creek mine EPL 20221. Mandatory Environmental Audit (Noise). Following a history of noise exceedances. Note - similar Joint Venture partners - Itochu and J-Power.
- Gunnedah Coal handling Plant EPL 3637 ("WHITEHAVEN SIDING COAL LOADER AND PREPARATION PLANT") the NSW EPA placed a variation on EPL 3637 requiring the company to rectify the situation with ongoing dust pollution. "Clause 8 Pollution Studies and Reduction Programs - U1 Implement actions to reduce coal dust tracking off the premises"

So it is misleading to state that they have no proceedings for protection of the environment.

10. ABSENCE OF MANAGEMENT PLANS A SERIOUS RISK

Whitehaven's Vickery Extension Management Plans and Strategies need to be made available to stakeholders and the public for this community to be able ensure the level of management measures required to mitigate the impacts to Privately Owned Land, Boggabri Township and to the Environment is required.

*Noise Management Plan

*Air Quality Management Plan

*Blast Management Plan

*Water Management Plan

*Biodiversity Management Plan

*Traffic Management Plan

*Environmental Management Strategy

*Flood Management Plan

By not allowing the content of a number of Vickery Extension Management Plans to be made available for public viewing is wrong. To enable this process in the "EIS stages" in the initial Vickery Extension Management Plans would enable informed decision-making. In the past, the Maules Creek Coal Mine has released a number of Management Plans and changes to the wording of these Management Plans happens continuously. This has resulted in a number of false and misleading information being presented to the Community Consultative Committee and to the Department of Planning. For example, creeks and streams being listed incorrectly in the WHC MCCM Biodiversity Management Plan etc. and literally years go by with unending, unanswered complaints.

11. SOCIAL IMPACTS OF VICKERY COAL MINE

Social impacts of the mine includes health and well-being, including physical and mental health. According to the Social Impact Assessment, existing local mining operations form part of the basis of assessment. Many impacts are not quantified, such as for example the effect of mine noise on sleep disturbance and quality of life is completely ignored in the Social Impact Assessment, yet widely known since a very large number of Boggabri and Maules Creek residents lodged moving objections to the Maules Creek noise modification last year.

Health

The Social Impact Assessment does not refer to the growing evidence about rising bronchial ill-health in Boggabri and Narrabri towns, reported anecdotally by GPs, and is consistent with health problems in the Upper Hunter Valley. The reported increase in bronchial medications has occurred since the time of the Maules Creek mine, and Boggabri extension. Furthermore we are

exceptionally disappointed that the recently established Namoi Air Quality Monitoring System does not incorporate dust monitoring in or near the town of Boggabri.

Mental health

The SIA makes much of the fact that "anxiety" is a national problem. However, I believe that anxiety in coal-affected communities is based on real triggers that emanate directly from the coal mining industry. Examples include:

- The threat of loss of livelihood and property rights
- Dividing neighbor against neighbour is a common tactic of Project Delivery personnel to break down a bloc of landowners who deny access to their land
- Night-time noise and sleep disturbance is bound to result in some anxiety

Therefore, to blame the anxiety in coal-afflicted communities on a general national mental health problem fails to properly assess mental health impacts of the Vickery coal mine itself on the local community.

Loss of farming families from the region

Over 70 farms have been sold to coal mines in the area around the Boggabri and Maules Creek region. This has caused leakage of long-term resident population and replaced them with tenants in the most part, many of whom do not bring their families with them. Many more tenants are employees of the mines, and do not farm. Farming land is either grazed by arrangement with other parties, or left unfarmed, often because the property has been deemed a biodiversity offset.

Community groups such as the NSW Rural Fire Service, the Country Women's Association, Meals on Wheels, etc suffer due to the decline in permanent residents.

This has led to a downward economic spiral in Boggabri.

Employment forecasts unreliable due to the prevalence of drive-in, drive-out workers

It is a well-observed fact that even mine staff who have an address in Boggabri are Drive-in, Drive-out workers. They tend to leave their families in places such as the Hunter Valley towns, and commute weekly to their work. This has not been addressed in the SIA. Boggabri has not received an influx of population, and Whitehaven are understood to encourage workers to live in Gunnedah instead, adding to road traffic.

12. THREATS TO THE TOWN OF BOGGABRI

Boggabri is a town in slow decline, despite the assurances that were made by the coal industry when the Maules Creek mine was being proposed that prosperity would come.

Despite strong support in the community for a dust monitor in the town of Boggabri, which is supported by Boggabri Coal (Idemitsu Resources), Whitehaven has opposed this plan. Although a Dept of Planning representative recently blamed this on the NSW EPA, there is written evidence that Whitehaven refused to support the Boggabri dust monitor unless it were paid for by the NSW Government.

Loss of population has an impact on housing occupation levels.

The CIVEO worker camp benefits to Boggabri are overstated – CIVEO never patronized the Boggabri butcher, for example, and bought their meat from elsewhere.

Businesses in Boggabri have not seen the benefit from decade of coal mines, if anything the reverse has happened. Only one pub out of three remains in operation.

There is no child care centre and furthermore Whitehaven Coal approached Narrabri Council and advised them not to invest in child care in Boggabri, which is a disincentive to young families who may wish to relocate there. Community bitterness surrounding the child care centre has caused extreme distress to the Boggabri Business and Community Progress Association, which strives to secure the survival of the town.

13. NOISE

The Noise Impact Assessment has extremely significant ramifications for the surrounding community, with impacts that will extend to the town of Boggabri, based on our knowledge of other coal-affected towns such as Wollar and Bulga, which are being gradually depopulated due to mine encroachment and noise issues.

The construction of a coal handling and processing plant at the Vickery coal mine is an additional threat, as it will produce unacceptable levels of low-frequency noise. This is well-known to occur, and is well-documented that CHPPs produce highly disturbing noise in the 16-25Hertz range. Whitehaven's Maules Creek coal mine has intractible noise problems at the 50 Hz frequency.

In addition, the Noise Impact Assessment fails to include key noise producing infrastructure in its modelling.

We do not find it credible that the 10 MTPA mine will be quieter than the 4.5MTPA version that was previously approved in 2015.

14. BLASTING IMPACTS

The blasting impacts experienced by residents of the Vickery area are already a great worry to those people, the blasts from Tarrawonga and Rocglen in particular. However, it is not just the closer mines that are a threat. Below is a photo taken at Emerald Hill, of a Maules Creek blast some

37km to the North-East, showing the dust cloud moving south. This shows how wide the dust clouds can travel in susceptible wind conditions.

Blasting is not only an issue for PM10 dust, but also NO2 fumes. Blasting fumes are a high concern for residents, and the fumes have been reported to escape the mines sites on many occasions, too many to state.

Whitehaven Coal is known to disregard wind conditions and proceed to blast even when human populations are at risk. This is well-documented, and has been the subject of extensive investigations.

Therefore, an appropriate Blast Management Plan should have been submitted along with this EIS.

15. CONCLUSION – THIS MINE SHOULD NOT PROCEED.

Nor should the CHPP and the railway.

Thank you for your consideration.

Wando Conservation and Cultural Centre Inc.
Black Mountain Creek Rd, Maules Creek

wandoccc@gmail.com

24 October 2018