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Heart of the North West

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Dear Sir/Madam,

RE: Vickery Coal Mine, Vickery Extension Project Environmental Impact Statement

Thank you for the opportunity to make a submission in response to the Environmental Impact Statement (**EIS**) for the Vickery Coal Mine, Vickery Extension Project (**the Project**).

Council's approach to this submission

Whilst the Project spans parts of the Narrabri Shire and Gunnedah Shire Local Government Areas, the scale of the Project means that the benefits and impacts will go beyond shire boundaries. In this regard, Narrabri Shire Council (**Council**) has reviewed the Project as a whole and has formulated this submission from that perspective.

Statutory planning matters

State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)

Pursuant to Clause 7 of SEPP 55, a Preliminary Site Investigation (**PSI**) was submitted with the EIS. The PSI recommends that further investigations be undertaken in the form of a Detailed Site Investigation (**DSI**) for a number of the features of interest identified in the PSI. This DSI has not been submitted with the EIS. In order to comply with clause 7 of SEPP 55, the DSI should be submitted prior to determination of the application.

Council requirement

1. That the proponent prepare and submit a DSI prior to the determination of the Project.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP)

Clause 12(b) of the Mining SEPP is not adequately addressed in EIS insofar as it does not evaluate and compare the respective public benefits of the Project and the existing uses and approved land uses in the area.

Clause 12A of the Mining SEPP is not adequately addressed in EIS.

Clause 16(3) of the Mining SEPP requires roads authority comments.

Clause 18 of the Mining SEPP is not adequately addressed in EIS. The Project is described as including the transportation and disposal of dewatered CHPP coal reject material from the Whitehaven CHPP and Project CHPP (which will include imported coal from other mines).

Council requirement

2. That the proponent address the above provisions of the Mining SEPP.

State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)

The Project will include works in and adjacent to a rail corridor. Clause 85 of the Infrastructure SEPP is not adequately addressed in EIS.

The Project will include works on land with frontage to a classified road. Clause 101 of the Infrastructure is not adequately addressed in EIS.

The Project will generate more than 200 vehicles per hour during construction of the development. Clause 104 of the Infrastructure SEPP is not adequately addressed in EIS.

Council requirement

3. That the proponent address the above provisions of the Infrastructure SEPP.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33)

According to the EIS:

> Potentially hazardous materials required for the Project include hydrocarbons (petrol, diesel, oils, greases, degreasers and kerosene), explosives, chemicals and Liquid and Non-Liquid Wastes. (p. 4-141)

SEPP 33 requires a Preliminary Hazard Assessment (**PHA**) to be prepared for potentially hazardous industries. A PHA (Appendix P) has been prepared in accordance with a number of relevant documents including the *Assessment Guideline: Multi-level Risk Assessment (2011)*. The guideline notes that not all elements contained within the guideline may be applicable to all developments, however, it notes that there are basic information requirements common to all (page 22). Some of these requirements have not been included in the PHA, including:

- a site drawing, showing manufacturing and storage locations in sufficient detail to at least allow screening and risk classification and prioritisation steps to be carried out
- a description of the nature and scale of the proposal, including throughput, storage quantities and conditions, types of manufacturing operation, and transport arrangements for significant movements of dangerous goods
- the quantity and location of all dangerous goods stored and handled on site.

Council requirement

4. That the proponent update the PHA to provide detail on the location and quantities of hazardous materials to be stored on site in accordance with the above points.

Narrabri Local Environmental Plan 2012 (Narrabri LEP) Gunnedah Local Environmental Plan 2012 (Gunnedah LEP)

The Project includes the receipt and disposal of dewatered CHPP coal reject material, which is considered to be waste. The permissibility of the receipt and disposal of this waste material is required to be considered in terms of Narrabri LEP and Gunnedah LEP.

Council requirement

5. That the proponent address the permissibility of the above land use under the Narrabri LEP and Gunnedah LEP.

Ecological sustainability of the development and application of the precautionary principle to the development

The objects of the *Environmental Planning and Assessment Act 1979* (**EPA Act**) include:

(a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,
(b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment, (s. 1.3)

The Australian National Strategy for Ecologically Sustainable Development defines ecologically sustainable development as "development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends" (p. 8, 1992).

The *Protection of the Environment Administration Act 1991* provides:

> ...If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by: (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and (ii) an assessment of the risk-weighted consequence of various options. (s. 6, cl. 2(a))

The NSW Government should apply the principles of ecologically sustainable development and the precautionary principle to the assessment of the Project.

Council requirement

6. That the Department of Planning and Environment (**DPE**) ensure that the Project is ecologically sustainable from an economic, environmental and social perspective.
7. That DPE apply the precautionary principle in the assessment of the economic, environmental and social impact of the Project.

Environmental assessment

Agriculture

Council notes that a Site Verification Certificate issued by the NSW Government certifies that the Project area does not contain biophysical strategic agricultural land (**BSAL**) which is "land with high quality soil and water resources capable of sustaining high levels of productivity." (NSW Government)

The EIS (Appendix H) concludes that there will be a post-mining loss of around 2500 ha of agricultural land (due to rehabilitation to woodland/forest, the final void pit lake and highwall). The majority of this land is currently "suitable for grazing but not for cultivation" according to the Hulme et al., (2002) Agricultural Suitability system (p.45). There will be a post-mining restoration of approximately 342 ha of agricultural land (p.57) or around 12% of existing agricultural land.

The EIS (Appendix J) concludes that the direct agricultural impacts of the Project are:

- a reduction in agricultural gross values (revenues) by $33.0 million in NPV terms or $3.1 million annually; and
- a reduction in agricultural gross margins by $17.9 million in NPV terms or $1.6 million annually. (p. 5)

According the EIS (Appendix J), the agricultural flow-on impacts are:

- a reduction in disposable income of $15.5 million in NPV terms ($0.7 million per annum in NPV terms); and
- a reduction in employment of 12.6 FTE jobs over the life of the Project (0.5 FTE job per annum). (p. 5)

A proposed policy principle contained the NSW Government Mine Rehabilitation Discussion Paper (**MRDP**) was:

1. Rehabilitation outcomes and proposed post-mining land uses must minimise the sterilisation of land and maximise beneficial social, economic and environmental outcomes for the locality and region.

Narrabri Shire community via the *Community Strategic Plan Narrabri Shire 2027* consider the protection of agricultural land to be paramount. The loss of around 88% of agricultural land in the Project area and the direct and flow-on agricultural impacts are contrary to the draft policy principles of the MRDP, the aspirations of the Narrabri Shire community and are inconsistent with the objectives of Zone RU1 (Primary Production) under the Narrabri LEP and Gunnedah LEP.

Council requirement

8. That the rehabilitation outcomes and proposed post-mining land uses associated with the Project be amended to ensure that a greater proportion of the Project area is returned to agricultural land use with at least 900 ha returned to Class 3 Agricultural Suitability i.e. "Grazing land or land well suited to pasture improvement."

Bushfire

The Project is located partially on land mapped as Bush Fire Prone. According to the EIS (Section 4):

> Any uncontrolled fires originating from Project activities may present potentially serious impacts to nearby rural properties and the Vickery State Forest. The development of the Project could increase the potential for fire generation. (p. 4-14)

The Project will employ a significant number of people who may be at risk during a bushfire event and the Project will contain materials that may result in ignition of a bushfire.

Council requirement

9. That the proponent prepare a Bush Fire Assessment Report in accordance with the NSW Rural Fire Services *Planning for Bush Fire Protection 2006* prior to the determination of the Project.

Groundwater

The EIS (Section 4) states that:

> Groundwater modelling undertaken for the Tarrawonga Coal Project (Heritage Computing, 2012) indicated that cumulative effects are not expected at the Tarrawonga Coal Mine from the Maules Creek Mine and Boggabri Coal Mine. As the Project is located a further 9 km south of the Tarrawonga Coal Mine, inclusion of the Boggabri and Maules Creek Coal Mines in the regional model was not required (Appendix A). (p. 4-25)

The groundwater impacts predicted in the EIS (Section 4) were based on:

> ...the cumulative impacts of the Project, the approved Rocglen and Tarrawonga Coal Mines and regional agricultural groundwater extraction. (p. 4-27)

According to the EIS (Section 7), as part of a Water Management Plan, the proponent will implement:

> ...a program to validate the regional numerical groundwater model for the Project. (p. 7-3)

Council is concerned that the groundwater modelling may not have accurately assessed the cumulative impact of all extractive industries in the area.

Council requirement

10. That the appropriate NSW Government Agency satisfy itself that the cumulative impacts of the Project and other extractive industries (operating and proposed) in the region on groundwater has been accurately modelled in the EIS.
11. That DPE require as a condition of consent that:
    a) *The proponent shall implement a groundwater monitoring plan.*
    b) *The groundwater monitoring network include the use of telemetric meters and the proponent shall ensure that real-time results are published in a publically accessible and transparent way.*
    c) *The proponent review the groundwater model two years after commencement of operations.*
    d) *The proponent undertake validation and recalibration of the groundwater modelling.*
    e) *The proponent review and revise relevant management plans to ensure early prediction of impacts and the implementation of adequate monitoring, management and contingency measures.*

According to the EIS (Section 7):

> The groundwater monitoring network will be sampled during mining and for at least two years following mining. (p. 7-8)

Council requirement

12. That DPE require as a condition of consent ongoing monitoring of groundwater impacts and that real-time results are published in a publically accessible and transparent way for a period of 5 years. At the end of this time, independent expert review shall be undertaken to determine whether ongoing monitoring is required.

According to the EIS (Section 7), the predicted drawdown is:

> ...within the 'Level 1' minimal impact criteria of less than 2 m drawdown, as defined in the Aquifer Interference Policy (AIP), at any privately-owned groundwater bore (Appendix A). (p. 4-13)

Council requirement

13. That DPE require as a condition of consent that the *proponent implement any and all necessary 'make good' provisions, nominated by the affected party, at any privately-owned or publically-owned groundwater bore impacted by the Project including but not limited to:*
    a) *deepening the affected groundwater bore (including lowering pump set and/or provision of new pump set and power supply if required);*
    b) *construction of a new groundwater bore (including provision of new pump set and power supply if required); and/or*
    c) *provision of an alternative water supply of appropriate quality and quantity; and/or*
    d) *provision of compensation.*
14. That the proponent model the impact on Boggabri's town bore (and any future augmentation) depicted *Figure 1* and that Council have the opportunity to review the model and provide comment.

Water balance

The overall water balance of a mine site is an important consideration when assessing surface water risks. Variability in local hydrology may result in a shift between a mine being water positive or negative (Northey et al., 2016). According to the EIS (Appendix B):

> ...the Project would be able to operate effectively and meet the water requirements for coal processing and dust suppression in any of the range of climate sequences represented in the historical record. (p.101)

The EIS (Section 7) goes on to say that:

Periodic review and revision of the site water balance will be undertaken over the life of the Project to record and document the status of inflows (water capture), storage and consumption (e.g. dust suppression and Project CHPP water supply) and to optimise water management performance. Monitoring will be undertaken over the life of the Project to provide data for refinement of the site water balance (Section 7.3.2). (p. 7-2)

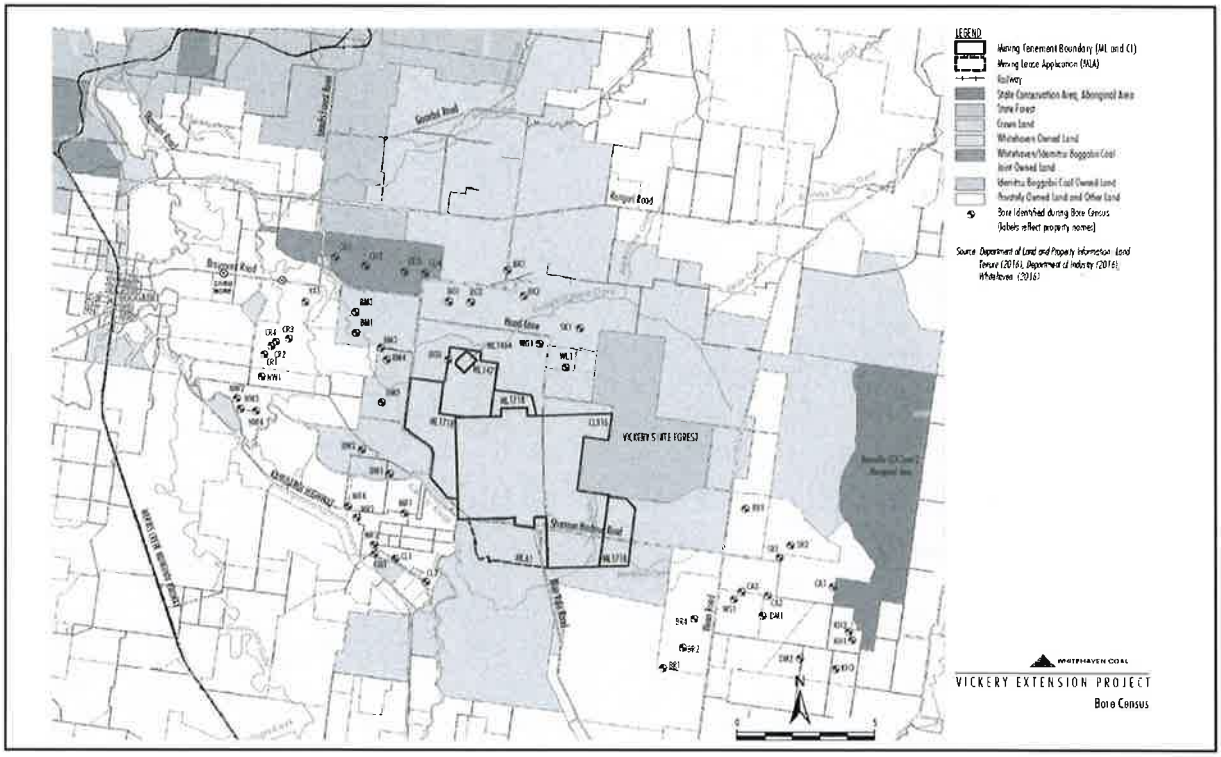

Figure 1 Boggabri's town bore

Council requirement

15. That DPE satisfy itself that the site water balance is adequate to meet with operational requirements of the Project including any additional environmental management and rehabilitation requirements.
16. That DPE require as a condition of consent that:
    a) *The proponent shall implement a water management plan, which as a minimum includes the annual review of the site water balance over the life of the Project.*
    b) *Results of the annual review of the site water balance are published in a publically accessible and transparent way.*

Runoff and discharge of mine water

According to the EIS (Appendix B):

> Approximately 15% of the runoff would overflow following rainfall events that exceed the design capacity of the sediment dams. (p.98)

The EIS (Section 4) goes on to say that:

> ...overflows from one of the sediment dams would only occur on average one day in every 3 years ... controlled releases from sediment dams would only occur on average two days per year and in accordance with an EPL. (p. 4-39)

Sedimentation of discharged pollutants may occur in receiving waters and have the potential to remobilise if conditions in the watercourse alter. Discharges should preferably occur during periods of high flows to maximise dilution of pollutants in the receiving water (Northey et al., 2016).

According to the EIS (Section 4):

> Controlled discharge to restore the capacity of sediment dams, which would only occur if the water had a suspended solids concentration of less than 50 mg/L. Prior to controlled discharge the water would be sampled and analysed to check its suitability for discharge. With these controls in place, the Project is predicted to have negligible impact on water quality in the receiving watercourses (Appendix B). (p. 4-38)

Council requirement

17. That the EPA satisfy itself that proposed discharges from the Project sediment dams will have an acceptable impact on receiving waters.
18. That the EPA specify criteria that discharge water shall meet to ensure an acceptable impact on receiving waters.
19. That DPE require as a condition of consent that:
    a) *The proponent shall ensure no discharge of water that has been in contact with coal.*
    b) *The proponent shall sample and analyse proposed discharge water to ensure that it meets EPA requirements.*
    c) *The proponent shall ensure the results are published in an accessible and transparent way.*
    d) *The proponent shall ensure no discharge of water from sediment dams unless the conditions at receiving waters are adequate to ensure appropriate dilution of discharge water.*
    e) *The proponent shall record each discharge, the results of testing and publish them in a publically accessible and transparent way.*

Final voids

Water impacts often occur post-closure, following the abandonment or rehabilitation of the mine site (Northey et al., 2016) therefore it is critical that the NSW Government consider final landform carefully during the assessment of the Project.

Final void lakes can result in drawdown of groundwater due to evaporation (Eary and Watson, 2009) while mine surfaces and tailings storage facilities may migrate through groundwater systems (Northey et al., 2016).

According to the EIS (Section 4):

> Following closure of the Project the final void would remain as a groundwater "sink". Groundwater inflow to the final void is predicted to equilibrate at approximately 0.3 ML/day to 0.5 ML/day. (p. 4-26)
>
> Water within the final void would not migrate out of the void and therefore would not adversely affect surrounding groundwater resources. (p. 4-27)
>
> Water would only be lost from the final void through evaporation. The water level in the final void would remain at least 140 m below the crest of the void and would not overflow to downstream watercourses. (p. 4-40)

It is accepted that final voids can act as sinks to trap potential groundwater contaminants (Johnson and Wright 2003, Northey et al., 2016) preventing them from entering local aquifers, however, the MRDP suggests that:

> ... there may be scope to backfill [final voids] without affecting the overall economic case for a project, particularly where backfilling is incorporated in the mine design from project inception, rather than retrofitting to an existing mine design. (p. 10)

According to the EIS (Section 6):

> The estimated cost of the [filling the final voids] is approximately $600 million (based on an estimated cost of $4 per cubic metre of material rehandled). (p. 6-15)

Puhalovich & Coghill (2011), suggest that "... long term management of environmental risks and return of land to an acceptable post mining land use can in some circumstances only be achieved by pit backfilling." It is Council's policy position that backfilling of final voids should be a fundamental requirement of all mining approvals.

Council requirement

20. That the proponent model and assess the impacts of filling in the void, and then conduct a cost-benefit analysis of the 'final void' and 'no final void' scenarios.

According to the EIS (Appendix B):

> Maximum salinity in the pit lake will be 99,017 mg/L under a worst case scenario and will exceed the salinity of seawater (approximately 35,000mg/L) under the majority of scenarios (p. 105)

Due to the poor water quality in final void lakes, were they to overfill, the water would have a detrimental impact on surrounding land (Walters, 2016). This is a significant concern for Council for final voids on the floodplain. In the case of the Project, the EIS (Section 4) states that:

> The water level in the final void would remain at least 140 m below the crest of the void and would not overflow to downstream watercourses. (p. 4-40)
>
> Based on the modelling results, the height of the proposed bunds/levees would range between 0.3 to 1.6 m to achieve flood immunity during an extreme flood event (i.e. three times the 1% AEP) and prevent flood water entering the final void following mine closure (Appendix C). (p. 4-46)

Council requirement

21. That DPE satisfy itself that the final void lake will not overfill under any scenario including but not limited to in the probable maximum flood event.

Flood

The EIS (Appendix C) includes flood analysis for both the Namoi River and local catchments (Driggle Draggle Creek to the north and Stratford creek to the south) based on a 15m grid, two-dimensional Tuflow model. The model incorporated input hydrographs determined by XP-Rafts calibrated against a combination of flood frequency analysis, historical models and the regional flood frequency estimation model 2016. This methodology is considered appropriate and adequate for the purpose.

The flood assessment indicates that the Project, except for the rail spur, will have no impact on mainstream Namoi river flooding. Impacts from the rail spur are limited to upstream land owned by Whitehaven Coal. The impacts shown in the Flood Assessment should form the basis for acceptable impacts for the detailed design of the rail spur.

South Creek and Stratford Creek are proposed to be contained by levees, which will impact on the flood flows, however, impacts are limited to land owned by Whitehaven Coal.

The proposed re alignment of Blue Vale Road provides an opportunity to raise road levels as appropriate to reduce the likelihood of road access being cut in shorter duration events. The road levels should be designed to be above the 1% AEP flood.

Council requirement

22. That DPE require as a condition of consent that the impacts shown in the Flood Assessment should form the basis for acceptable impacts for the detailed design of the rail spur.
23. That DPE require as a condition of consent that Blue Vale Road be designed to be above the 1% AEP flood subject to satisfactory assessment of the impacts on the floodplain.

Noise

According to the EIS (Appendix D):

> If approved, the Project may operate concurrently with the Rocglen Coal Mine, the Tarrawonga Coal Mine, the Boggabri Coal Mine and the Maules Creek Coal Mine. In this event, receivers may potentially be exposed to noise from all five (5) industrial sources simultaneously. (p. 42)
>
> ...night time cumulative noise levels would comply with the recommended acceptable amenity criterion (40 dBA $L_{Aeq,9hr}$) at all privately-owned receivers. (p. 43)

Council requirement

24. That the EPA satisfy itself that the cumulative and Project specific noise levels are within acceptable amenity criteria.
25. That DPE require as a condition of consent that:

a) *The proponent shall implement an extensive real-time noise monitoring plan.*
b) *The noise monitoring network include the use of telemetric meters and the proponent shall ensure that real-time results are published in a publically accessible and transparent way.*
c) *The proponent shall implement all necessary mitigation measures to ensure noise levels are within acceptable criteria.*

26. That the DPE in consultation with the EPA consider whether a 'regional' approach to noise management and monitoring is required given the cumulative impact of mines operating in the locality. This could include a coordinated noise management approach between mines.

Blasting

Exposure to 'blast overpressure' or high energy impulse noise can impact human health. According to the EIS (Section 4):

> No exceedances of vibration and airblast criteria are predicted to occur at any privately-owned receiver. (p. 4-59)

Council requirement

27. That the DPE satisfy itself that airblast overpressure and vibration levels for the Project have been accurately modelled in the EIS.
28. That NSW Health and / or other appropriate NSW Government Agency satisfy itself that airblast overpressure and vibration levels from the Project will not result in unacceptable human health impacts.

Air quality

Exposure to suspended particulate matter (**PM**) can result in adverse health impacts. The likely risk of these impacts to a person depends on a range of factors including the size, chemical composition and concentration of the particulate matter, and the existing health of the person (NSW Health and NSW Minerals Council, 2011). Maximum levels to reduce the risk of adverse health effects for $PM_{2.5}$ and PM_{10} and TSP concentrations are specified by the EPA in the Approved Methods (EPA, 2016). According to the EIS (Section 4):

> No privately-owned receivers are predicted to experience annual average PM_{10} concentrations, 24-hour average PM_{10}, annual average TSP, annual average $PM_{2.5}$, 24-hour average $PM_{2.5}$, dust deposition levels above the EPA due to the cumulative contributions from the Project, the Tarrawonga, Boggabri, Rocglen and Maules Creek Coal Mines and background sources (Appendix E). (p. 4-68)

Given the greater health risks associated with $PM_{2.5}$ relative to TSP and PM_{10} and given the significance of $PM_{2.5}$ as a proportion of the overall particulate matter increases with distance from the source (Richardson et al., 2018), Council considers reporting and monitoring of $PM_{2.5}$ critical to the Boggabri community.

According to the EIS (Section 7), as part of an Air Quality Management Plan, the proponent will implement a:

> ...real-time air quality monitoring program. (p. 7-4)

...network of real-time dust monitors in the vicinity of the Project will continuously log short-term particulate matter concentrations and report the data to a web-based recording system. (p. 7-10)

Council requirement

29. That the EPA satisfy itself that air quality impacts have been accurately modelled in the EIS.
30. That NSW Health and / or other appropriate NSW Government Agency satisfy itself that air quality impacts including but not limited to the physical and chemical properties of PM from the Project will not result in unacceptable human health impacts.
31. That an on-going independent monitoring program carried out by experts in their fields be implemented under the direction of the NSW Health and / or other appropriate NSW Government Agency at the proponent's expense for increased presence of health impacts as a result of the Project.
32. That DPE require as a condition of consent that:
    a) *The proponent shall implement an extensive real-time air quality monitoring plan including but not limited to real-time air quality monitoring of $PM_{2.5}$ PM_{10}.*
    b) *That real-time air quality monitoring results are published in a publically accessible and transparent way.*
    c) *The proponent shall implement all necessary mitigation measures to ensure emission levels are within acceptable criteria.*

According to Ramboll Environ Australia Pty Ltd (2016):

> Fugitive emissions from coal mines are estimated to contribute to approximately 87% of total PM_{10} emissions and 58% of the total $PM_{2.5}$ emissions in 2021 [with] the largest increases in PM_{10} and $PM_{2.5}$ concentrations predicted in the towns of Werris Creek, Curlewis and Boggabri.
>
> Compliance with the National Environment Protection (Ambient Air Quality) Measure $PM_{2.5}$ standard of 8 $\mu g/m^3$ may not be achieved at some towns.

Council requirement

33. That the EPA expand the Namoi Region Air Quality Monitoring Project (**NRAQMP**) to include stations at Curlewis and Boggabri to monitor $PM_{2.5}$ and PM_{10} emissions and undertake quarterly compositional analysis to determine the level of contribution from coal mines to the local air quality.

Biodiversity

The EIS identifies that the Project will impact Core Koala Habitat as defined by *State Environmental Planning Policy No. 44 – Koala Habitat Protection* (**SEPP 44**). Clause 9 of SEPP 44 requires a Koala Plan of Management (**KPoM**) be prepared, in accordance with Part 3 of SEPP 44 prior to consent being granted to a Development Application. The EIS notes that a KPoM will be prepared subsequent to the approval being granted and required as a condition of consent.

Council requirement

34. That the DPE require the submission of the KPoM and make it available for review prior to determination of the Project.

Employment estimates

According to the EIS (Appendix J):

> The Project would require a peak construction workforce of up to approximately 500 FTE jobs, and a peak operational workforce of approximately 450 FTE jobs. On average, the Project would employ an operational workforce of approximately 344 FTE jobs between 2020 and 2044. The Approved Mine would require a peak construction workforce of approximately 50 FTE jobs, and employ an average operational workforce of approximately 213 FTE jobs between 2019 and 2048. (p.12)

Although the Extension Project will require additional workers, which is most likely attributed to the construction of rail infrastructure, the relatively large increase in projected jobs growth and corresponding decrease in resource availability (from 186 Mtpa to 179Mtpa as a result of removing the Blue Vale Open Cut from Project scope – ES3.8) requires further investigation, particularly during the operational phase. Publication of baseline data may assist Council to understand the basis of these figures and gain the necessary confidence in the calculation of construction and operational employment estimates.

Council is concerned that the dramatic increase in employment appears very optimistic and may not reflect the actual employment likely to materialise if the Project commences.

Council requirement

35. That the proponent provide more information with respect to baseline data that has been used to estimate projected employment statistics.

Local Government Rates Estimates

According to the EIS (Appendix J):

> The exact amount of rate payments that would arise in the counterfactual is not known. For the purpose of the CBA, and given the size of the Project mining leases, it has been assumed that in the absence of the Project or the Approved Min, there may be around 20 farming properties paying an average of $6,121 per property (the average of GSC and NSC rates per framing property) or $122,420 per annum. On that basis, the incremental rate payments of the Project are estimated at around $3.3 million in NPV terms. (p.27)

In the footnotes on page 26, the rationale for this approach has been attributed to changing rate categories (from agriculture to mining). The proponent may not have considered that local government rating structures can differ between Councils. Furthermore, individual properties within a local government area are often calculated based on specific criteria. Therefore, it is not always prudent to calculate local government rates income by creating an average across two local government areas.

Council is concerned that the investigation into projected rates income is not accurate and that the counterfactual scenario needs to be determined.

Council is willing to work with the relevant parties to ensure that ratepayers have access to precise and responsible financial data that relates to the local government area. It should also be noted that the EIS indicates that overall local government rating income is likely to decrease, resulting from a shorter mine life of the extension project relative to the approved mine (p.48).

Council requirement

36. That the proponent work with Council to provide a more accurate investigation into projected rates income and counterfactual scenario.

Cost benefit analysis

Council expresses concern that Net Present Value calculations, as illustrated on pages 47 and 48 of Appendix J do not include any production related costs. Furthermore, estimates and costs with respect to environmental externalities, may be significantly underestimated. In addition to the issues raised about the calculation of the local government rates income in the above section, Council request that the proponent amend Net Present Value calculations following investigation and expected revisions of baseline figures, as described in earlier sections of this submission.

Council requirement

37. That the proponent include production related costs in the cost benefit analysis.
38. That the proponent amend Net Present Value calculations following investigation and expected revisions of baseline figures.

Local Effects Analysis

Council is concerned that this section does not fully consider the additional financial and social costs that ratepayers and residents in the Narrabri Local Government Area will face over the life of this project in particular the Boggabri community.

According to the EIS (Appendix J):

> A more meaningful assessment of the localised impacts of the Project can be prepared by considering a study area comprising, at a minimum, the LGAs of Narrabri and Gunnedah within which the Project would be located and where Whitehaven would seek to recruit a significant share of the workforce. (p. 59)

While Council acknowledges the requirements to undertake such analysis at the Statistical Area Level 3 (SA3), the approach adopted by the Proponent to assess local impacts is, in Council's view, less than ideal. The "Project Region" has considered a much larger area encompassing Liverpool Plains, Tamworth Regional, Gunnedah and Narrabri local government areas. However, this does not fully account for the local impacts of the project on the township of Boggabri, which is the closest community to the Project. Council asks that the proponent undertake further Local Effects Analysis, which is specific to the Narrabri Local Government Area.

Council requirement

39. That the proponent undertake further Local Effects Analysis, which is specific to the Narrabri Local Government Area.

Tourism Impacts

According to the EIS (Appendix J):

> ...the relatively limited role of tourism accommodation in Narrabri and Gunnedah LGAs suggests that any impacts of the Project on tourism would be limited. Beyond the Narrabri and Gunnedah LGAs, the Project is not expected to adversely impact tourism. (p.65)

Narrabri tourism and accommodation providers are very proud of their contribution to the local community, and to the North-West region. Travellers along the Newell Highway regularly stop in the Narrabri local government area to enjoy scenic national parks and friendly rural hospitality. Tourism has supported the town and surrounding areas for many years and this should not be underestimated by the proponent in their economic assessment and local effects analysis.

Council requirement

40. That the proponent acknowledge the value and potential of tourism within the Narrabri Local Government Area in an updated Local Effects Analysis, which is specific to the Narrabri Local Government Area.

Social Impacts

Council believes that the proponent has not fully considered the social and economic impacts of importing such a large construction and operational workforce in such close proximity to Boggabri.

According to the EIS (Appendix R):

> Whitehaven anticipates that the Project operational workforce would be made up of approximately 70% local and approximately 30% non-local hires. For the purposes of impact assessment, it has been assumed that the workforce would reside in the following locations: Gunnedah (54% of workforce); Boggabri (21% of workforce); Narrabri (13% of workforce); Manilla (9% of workforce); Other (3% of workforce). (p. 5)

These statements indicate that the above workforce estimates reflect a higher proportion of workers residing in areas outside the Narrabri local government area. However, in later paragraphs, it has been acknowledged that:

> Boggabri is expected to host the majority of the Project construction workforce...and impacts due to the Project are likely to be noticeable to the residents of Boggabri. (p.6)

Furthermore, Appendix R states that:

> ...the Project may commence construction and operations within a similar timeframe to five other major projects (p.119)...the cumulative construction workforce peak could represent up to 1,900 people in the Narrabri LGA, or a temporary increase of around 14%. (p.120)

These cumulative labour dynamics have the potential to disrupt an already delicate socio-economic balance in rural communities such as Boggabri. The same section also indicates that the project may impact, "the population gender balance and community character."

Council requirement

41. That the proponent provide a more detail assessment of its workforce required for the Project, including measures to address gender balance in smaller communities.
42. That the overall impacts on the Narrabri Local Government Area are properly assessed and that cumulative labour impacts resulting from other major construction projects in the region have been properly considered.

Employment benefits

According to the EIS (Appendix R):

> ...it has been assumed that the workforce would reside in the following locations and approximate proportions:
> - Gunnedah (54% of workforce);
> - Boggabri (21% of workforce);
> - Narrabri (13% of workforce);
> - Manilla (9% of workforce); and
> - other areas (3% of workforce). (p. 101)
>
> ...the Project has potential to attract approximately 338 new local residents (inclusive of Project operational personnel and their family members) to the Project region (Table 4-1), including:
> - approximately 182 new residents in Gunnedah township;
> - approximately 71 new residents in Boggabri;
> - approximately 44 new residents in Narrabri township;
> - approximately 30 new residents in Manilla; and
> - another ten new residents elsewhere within a safe commute to the Project. (p. 102)

To sustain the proponent's social licence it is important that the Boggabri community and wider Narrabri Shire realise the employment benefits associated with the Project.

Council is concerned that global megatrends in automation pose some serious questions over the long term employment benefits associated with the Project i.e. it is likely that over the 25 year life of the mine the number of jobs replaced by automation will be significant.

Council requirement

43. That the DPE require as a condition of consent *that 50% of the operational workforce reside in Narrabri Shire Local Government Area.*

44. To provide long term career pathways for locals and ensure that an appropriately skilled workforce is employed, that the DPE require as a condition of consent *that the proponent provide scholarships and develop suitable training and apprenticeship programs in consultation with local TAFE and other training institutions aimed at providing school leavers and other locals with a pathway to employment in extractive industries.*
45. That the proponent prepare a workforce management plan for the life of the Project that specifically addresses the use of automation and the impacts on the Project workforce requirement and employment benefits.

Aboriginal employment

Council encourages the proponent to work constructively with local Aboriginal stakeholders to ensure that any adverse impacts of the mine are managed appropriately and in accordance with relevant cultural protocols. Council welcomes the employment of local Aboriginal people and the proponent's 10% target of the operational workforce consisting of Aboriginal or Torres Strait Islander descent is a step in the right direction. However, Council notes that the EIS, quoting Australian Bureau of Statistics, lists local Aboriginal populations in both Gunnedah and Narrabri as over 10%, which is much higher than the NSW average (p.87). The proponent may wish to consider increasing this target to 15%, including additional support and training for local Aboriginal apprentices and workers.

Council requirement

46. That the proponent adopt a more ambitious target for the employment of local Aboriginal people, including additional support and training for local Aboriginal apprentices and workers.

Boggabri Community

Council firmly believes that the proponent needs to increase its contributions and donations to the township of Boggabri, as this community will experience the greatest disruption because of this Project moving forward.

According to the EIS (Appendix R):

> ...Boggabri, to date, had not experienced the same level of benefits that Gunnedah and Narrabri had experienced as a result of the region's existing mining operations. (p. 7)

The Social Impacts Analysis explores many of the pressures that many rural communities such as Boggabri face with respect to the recruitment and retention of essential staff in police, health, education, child-care and emergency services. This can be exacerbated by the socio-economic impacts of industries such as mining (Rolfe et al, 2007). The EIS (Appendix R) has acknowledged the "stress and anxiety" that project planning phases have had on surrounding property owners, in addition to the challenges faced by local farmers during ongoing drought (p.44). Furthermore, the essential rural character and sense of community of places such as Boggabri are likely to be affected during the life of the project and decommissioning.

Council believes that the potential adverse impacts of this project on community infrastructure in the Narrabri Local Government Area have not been fully considered in the EIS.

Council requirement

47. That the proponent reconsider its approach to donations and contributions to ensure that the impact of this Project on Boggabri is minimised and / or offset.
48. That the proponent outline specific long-term plans, in addition to transition arrangements, for the township Boggabri once mine operations have ceased.

Rehabilitation

There is a need for certainty regarding rehabilitation and post-mining land uses as well as a need to ensure that the costs of rehabilitation and monitoring are accurately calculated to ensure that the state holds sufficient financial assurance to cover the estimated costs of rehabilitation. The Queensland Audit Office (2014) found that this is often not the case, and this is of particular concern due to the potential for unplanned closure of mines in periods of decline. According to Laurence (2006), a "study of more than 800 mine closures from 1981 to 2005 in Australia found that 75% of the closures were unplanned". In this regard ensuring that the state holds sufficient financial assurance to cover the estimated costs of rehabilitation is imperative.

Council requirement

49. That the DPE satisfy itself that the state holds sufficient financial assurance to cover the estimated costs of rehabilitation.
50. That DPE require as a condition of consent that:
    a) *the proponent shall pay a security deposit in the form of a cash bond or bank guarantee of an appropriate amount that covers the true cost of rehabilitation.*
    b) *the Proponent shall carry pollution legal liability insurance that covers pollution and natural resource damage both on-site and off-site including groundwater contamination and depletion and for the benefit of the insured, third parties, and contractors.*
    c) *the Proponent shall contribute to an Environmental Fund (similar to the Western Australian Government Mining Rehabilitation Fund) established to cover off-site remediation and rehabilitation including groundwater contamination and depletion and other long term, gradual onset damage.*
51. That the appropriate NSW Government Agency monitor and enforce compliance with progressive rehabilitation targets if the Project is approved.
52. That the DPE require as a condition of consent that *the proponent shall prepare a mining plan that minimises the active mining footprint.*

Voluntary planning agreement and developer contributions

There are a range of impacts to roads, public infrastructure and services that are directly related to the Project that should be offset via monetary contributions from the proponent. An offset implies a "cancelling out" of the impact and in this regard contributions, infrastructure maintenance agreements etc. to offset impacts from

the Project do not negate the need for the Project to provide a net community benefit to Boggabri, the wider Narrabri Shire and Gunnedah Shire.

Given its proximity to the Project the most impacted community will be Boggabri. The Boggabri community are being asked to accept the risks and impacts (however well managed) associated with large-scale extractive industry and therefore it is imperative that they should see a net community benefit during and post mining operations.

Council does not consider merely "offsetting" the impact of the Project to be a satisfactory outcome for the community. Major developments such as the Vickery Extension Project are a once in a generation opportunity for the respective communities to put themselves on an upward trajectory in terms of population and economic growth.

Council requirement

53. That the proponent enter into a VPA with Council that reflects the socio-economic impacts in, and immediately around, Boggabri and provides a lasting net economic benefit to Boggabri, the wider Narrabri Shire and Gunnedah Shire.

Waste

Council requirement

54. That the proponent prepare a waste management plan structured around the waste management hierarchy defined under the *Protection of the Environment Operations Act 1997* and including measures to avoid, reduce, reuse, recycle and treat waste would be investigated in order to reduce the volumes waste and minimise potential environmental impacts.

Aboriginal Heritage

Council requirement

55. That consultation with the Aboriginal community should continue during the Project, including during the preparation of the Aboriginal Heritage Management Plan.
56. That Aboriginal access to traditional lands and the Namoi River be maintained as far as is practicable throughout the operational phase of the Project.

Historic Heritage

Council requirement

57. That the proponent be required to work with Gunnedah Shire to manage and mitigate the impacts on the weatherboard dwelling noted as having heritage significance.

Visual Impact

Council requirement

58. That the visual impacts, including impacts at night due to light, should be managed and mitigated as far as practicable throughout the operational phase of the Project.

Road transport

Council requirement

59. That the proponent provide information that satisfies Council that the proposed access route can be practically and legally enforced. If the access route cannot be assured to Council's satisfaction, that the proponent should submit a revised transport assessment to consider the impact on the Braymont Road and any other affected adjoining roads.
60. Many local roads within the Narrabri Shire area east of Boggabri are likely to require sealing or upgrading of the existing sealed road width and bridge/culvert repair/widening as a result of the cumulative mine generated daily traffic volumes from multiple coal mining projects, namely:
    - Braymont Road;
    - Therribri Road;
    - Leards Forest Road (or replacement road) following the Boggabri Mine expansion;
    - Barbers Lagoon Road; and
    - Hoad Lane.

    That the proponent be required to enter into discussions with Council regarding the upgrade requirements for impacted Council roads and that the upgrades be required as a condition of consent.
61. That DPE impose a condition on any project approval requiring the proponent to enter into a road maintenance agreement with Narrabri Shire for the maintenance of public roads affected by the project (construction, operation and rehabilitation), to the satisfaction of Narrabri Shire.
62. Confirmation on the timing of cessation of use of haul road and replacement with rail.

If you wish to discuss the matter, please do not hesitate to me on (02) 6799 6866

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Yours faithfully,

Mr Daniel Boyce
MANAGER PLANNING AND REGULATORY SERVICES

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