NSW GOVERNMENT | Planning & Environment

Prof Mary O'Kane
Chairperson
Independent Planning Commission of NSW
[redacted]
Sydney NSW 2001

Dear Prof O'Kane

Mount Pleasant Coal Mine - MOD 3 Extension of Mine Life (DA 92/97)

I refer to your letter dated 28 June 2018 requesting consideration of comments provided by Lock the Gate in respect of the Department's assessment of the Mount Pleasant Modification 3 application.

As identified in my letter of 29 June 2018, the Department believes that the matters raised by Lock the Gate concerning the merits of the proposed modification required a full and considered response. Following that review, the Department finds no basis for Lock the Gate's claims about the Department's consideration and treatment of submissions during the assessment process.

The Department maintains that it has completed a robust assessment of the proposed modification and considered all relevant environmental, social and economic factors under the *Environmental Planning and Assessment Act 1979*. The Department's assessment report has afforded appropriate consideration to each of the assessment matters raised by Lock the Gate, including human health and amenity standards, impacts on water resources, visual aesthetics, the compatibility of the development with surrounding land uses and the contextual relevance of assessment material in the applicant's Environmental Assessment.

The Department has provided detailed, written advice in **Attachment A** for the Commission's further consideration. This advice provides context around the consideration of the key issues raised by Lock the Gate, including the contextual relevance of assessment material and the consideration of air quality, noise and water impacts.

The Department has also identified that the EPA and NSW Health are the only two agencies that indicated they had continuing matters of interest in commenting on the Response to Submissions. These agencies have been asked to confirm their final position in respect of the Department's proposed amended conditions of consent. The Department will provide the Commission with copies of these responses once they are received.

Should you have any enquiries, please contact Howard Reed, Director Resource Assessments on 9274 6308.

Yours sincerely

[redacted] 9/7/18

Oliver Holm
Executive Director
Resource Assessments and Compliance

Attachment A – Response to issues raised by Lock the Gate

Relevance of Environmental Assessment material

Lock the Gate has raised broad concerns with the contextual changes that have occurred in the area around the project site since the Mount Pleasant mine was initially approved in 1999. This sentiment was expressly considered in the Department's Assessment Report for Mount Pleasant MOD 3.

Section 4.2 of the Assessment Report recognises that 42 public submitters and special interest groups raised concerns with the ongoing relevance of impact studies conducted in 1997. These submitters highlighted the recent development of nearby mines and industries, and requested that cumulative impacts, including air quality, noise and visual amenity are considered in this contemporary context.

The Department recognises that several aspects of the regional context have evolved over recent years and agrees that the project context has shifted since the project was initially approved in 1999. These changes include the progress of the Mount Arthur and Bengalla mines away from Muswellbrook township and the establishment of new government policies.

The Department initially identified this issue in a letter to MACH Energy dated 2 June 2016, which acknowledged the company's intentions to lodge a modification application to extend the life of its approved Mount Pleasant coal mine. This letter highlighted the importance of contextually relevant assessment material and noted that any modification application would need to be accompanied by contemporary air quality, greenhouse gas, noise, blasting, landscape, rehabilitation and road transport assessments that reflected the proposed extension to the life of mining operations. The Department also identified that MACH Energy would need to consider any other impacts, such as visual amenity, water, heritage and biodiversity, to the extent these matters would be affected by the modification.

The EA subsequently confirmed that MACH Energy is not seeking to change the core components of the development, such as the rate of ROM coal production, coal processing or waste rock production. Similarly, while the modification is seeking minor changes to the location of overburden emplacements, the additional disturbance to the east would continue to be located within existing mining leases, is offset by the relinquishment of disturbance areas to the west and constitutes a minor component of the site's total disturbance footprint.

It is critical to note that MACH Energy is not required to update impact studies unless they are relevant to the scope of the modification. For instance, if the footprint of the modified development does not change, there is no need to reassess activities within the approved disturbance area. The contemporary studies in the EA therefore focus on clarifying the incremental and cumulative impacts of the modified proposal in the current regional setting over the extended mine life. The Department is satisfied that the updated studies are sufficient to inform the consideration of the modified aspects of the development and that the 1997 studies remain relevant for those aspects that would be unchanged, in so far as it was these studies that led to the 1999 approval.

In considering the compatibility of the modification with surrounding land uses, the Department paid close attention to contextual elements (such as visual amenity) that could result in different impacts for surrounding stakeholders, relative to the approved operations currently permitted. The Department recognised that the amended final landform design and rehabilitation strategy would improve the mitigation of impacts on visual amenity in comparison with the existing approved landform and also noted that the existing conditions of consent require implementation of all reasonable and feasible measures to minimise visual and off-site lighting impacts and to provide additional visual mitigation at the request of nearby landowners. The Assessment Report concluded that, while the modification would prolong the remaining mine life (noting this is still a shorter duration that the original mine approved in 1999), the magnitude of visual impacts for receivers and industries in Muswellbrook, Aberdeen and Scone is unlikely to increase beyond that which is already approved, and in most cases would improve.

Air Quality

Lock the Gate has claimed that the EPA and NSW Health have expressed "serious concern about the cumulative air quality in and around Muswellbrook" and that MACH Energy has omitted information required for the consideration of these matters. More accurately, the EPA and NSW Health submissions identify that the EA predicts that several nearby receivers would experience air quality impacts above the impact assessment criteria contained in the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales 2016,* request the application of these

contemporary standards and request that all reasonable and feasible measures are taken to minimise and manage human exposure to particulate matter.

In undertaking its assessment of air quality impacts, the Department expressly acknowledged that the EPA, NSW Health and a number of public submissions commented on the variations to environmental assessment advisory standards established through *the National Environment Protection (Ambient Air Quality) Measure* (NEPM), including new $PM_{2.5}$ criteria for 24-hour and annual averaging periods (25 $\mu g/m^3$ and 8 $\mu g/m^3$, respectively) and a lower annual average PM_{10} criterion (down from 30 $\mu g/m^3$ to 25 $\mu g/m^3$).

In varying the NEPM to provide guidance on the establishment of air quality standards, the National Environmental Protection Council recognised that each participating jurisdiction is responsible for the application of these standards under its own laws and policies. This means that while the Department's assessment report may refer to and consider revised PM_{10} and $PM_{2.5}$ assessment standards, the proposal must be assessed and determined against applicable NSW policies and standards. Given the modification application was lodged after the January 2017 gazettal of the EPA's Approved Methods 2016, the Department required that the EA assess air quality impacts against the modelling and assessment criteria established in the Approved Methods 2016.

The EPA's submission on the modification confirmed that the EA included a full assessment of the air quality impacts associated with the proposed modification and other nearby mines. However, the EA and MACH Energy's RTS argued that the modification would not result in material changes the project's currently approved air quality impacts and sought the continued application of acquisition and mitigation rights based on the existing 30 $\mu g/m^3$ annual average PM_{10} criteria.

While the Department recognises that the Integrated Mining Policy's Voluntary Land Acquisition and Mitigation Policy (VLAMP) has not yet been amended to require the application of mitigation or acquisition rights for exceedances of the Approved Methods 2016 assessment criteria, these criteria have been developed for the purposes of protecting human health and amenity. Consequently, and in recognition of the concerns raised in community and agency submissions, the Department assessed the impacts of the proposed modification against the more conservative and contemporary 2016 standards and recommended that the Independent Planning Commission exercise its power to afford mitigation and acquisition rights to any private receiver that was predicted to exceed these particulate levels.

To inform this recommendation, the Assessment Report recognised that the 24-hour average PM_{10} criteria could be exceeded at nearby receivers under worst-case meteorological conditions if no dust management measures were implemented and operations were uncontrolled on site. However, with appropriate controls in place (eg increased dust suppression and limiting dust generating activities on site), the modification would not be expected to result in any exceedances of either the Approved Methods 2005 or the Approved Methods 2016 assessment criteria at nearby private receivers for incremental annual average deposited dust (2 g/m^2/month), cumulative annual average deposited dust (4 g/m^2/month), cumulative annual average total suspended particulates (90 $\mu g/m^3$); 24-hour average PM_{10} (50 $\mu g/m^3$), 24-hour average $PM_{2.5}$ (25 $\mu g/m^3$) or annual average $PM_{2.5}$ (8 $\mu g/m^3$).

The EPA's original submission also confirmed that its existing Environment Protection Licence (EPL 20850, issued 24/11/2016) contains conditions that require MACH Energy to implement reactive management measures, including cessation of dust-generating activities under adverse conditions, being elevated concentrations of PM_{10} and wind blowing from the north-west sector. The EPA also confirmed that the proposed modification would not require any changes to these licence conditions.

In the Department's experience, appropriate air quality management measures can materially reduce the frequency and extent of potential air quality impacts at surrounding receiver locations. In support of the EPA's EPL requirements and ensure these measures are implemented, the Assessment Report noted that proactive implementation of dust management measures is dependent on best practice air quality monitoring to guide both proactive and reactive management under dust generating conditions.

At present, Mount Pleasant's monitoring program consists of dust deposition gauges, high volume samplers and continuous real-time Palas Fidas monitors. The existing EPL requires monitoring of PM_{10} levels at the Muswellbrook NW Station of the Upper Hunter Air Quality Monitoring Network and the cessation of operations during adverse weather conditions, and the recommended conditions require that the mine be managed in accordance with an approved Air Quality and Greenhouse Gas Management Plan. The Department is satisfied that these measures are representative of industry best practice and that air quality impacts can be appropriately managed through the recommended conditions of consent.

Notwithstanding the above, the EPA's submission and comments on the RTS requested further information in relation to mitigation of annual average exceedances, noted that short-term reactive management would be unlikely to significantly change predicted annual average concentrations and requested that the Department consider the significance of predicted annual average impacts at nine nearby receivers which it identified as exceeding the EPA's impact assessment criteria.

In addressing this matter, the Department recognised that cumulative impacts from the modification and other background sources would be expected to result in exceedances of the EPA's Approved Methods 2016 annual average PM_{10} (25 $\mu g/m^3$) assessment criteria at nine separate dwellings located on seven nearby properties. Receiver 43 to the west of the Mount Pleasant project already has acquisition rights under the existing Mount Pleasant consent. Three remaining properties (representing five receivers) are located south of the Bengalla mine and are primarily impacted by the Mount Arthur and Bengalla operations. Each of these properties have existing voluntary acquisition rights under either the Mount Arthur approval or Bengalla consent. Receiver 6 identified in the EA represents the Muswellbrook Race Club and is not a private residence. Consequently, this receiver is not eligible for acquisition and mitigation rights under the VLAMP.

As acquisition rights have already been afforded to the above properties, only two receivers located to the southeast of Mount Pleasant (Receivers 20 and 21) remained who did not have existing air quality acquisition rights. While the modified Mount Pleasant project would contribute a relatively minor proportion of total impacts at these receivers, it would be responsible for elevating particulate matter levels to 26 and 27 $\mu g/m^3$ in the initial years of its mining operations. Consequently, the Department recommended that voluntary acquisition rights for air quality be extended to Receivers 20 and 21.

Overall, the Department considers that it has appropriately dealt with all matters relating to air quality raised in advice from government agencies and/or by Lock the Gate. This includes requiring an updated air quality impact assessment, implementation of best practice proactive and reactive management measures consistent with the EPA's existing EPL conditions and the recommendation that the Commission apply contemporary air quality standards in determining landowner rights under any modified consent.

Noise

Lock the Gate expressed concerns with the existing noise environment in and around Muswellbrook township, noted that the EPA sought further consideration of key noise issues and claimed that the Department did not require a comprehensive assessment of the modification's noise impacts in a current contextual setting.

As identified above, the Department expressly required the provision of an updated noise impact assessment that considered the current regional context and industrial noise sources in evaluating the likely impacts on surrounding receivers over the proposed extended life of the Mount Pleasant project.

This contemporary assessment was provided in the EA and identified that the modification would not be expected to materially change the project-alone impacts arising from the approved Mount Pleasant project, or the existing (industrial and background) noise environment in the vicinity of Muswellbrook. Further, MACH Energy is not seeking to increase its approved noise limits for receiver groups located in Muswellbrook township and would manage the project to meet the current consent's limits.

With respect to the issues raised by the EPA in relation to temperature inversions and low frequency noise, the Department notes that the EPA's comments on the RTS identify pathways that it considers appropriate to resolve these issues. To this end, the EPA identified two options for meteorological monitoring (including use of an on-site weather station) that would allow it to monitor and regulate noise limits under its EPL.

The Department supported the EPA's comments and notes that the recommended condition 24 of Schedule 3 for the modified development consent would require MACH Energy to ensure that, for the life of the development, there is a meteorological station operating in the vicinity of the site that is capable of continuous real-time measurement of temperature lapse rate in accordance with the *NSW Industrial Noise Policy*, or as otherwise approved by the Secretary. The Department is satisfied that, together with the requirements for a site Noise Management Plan, the recommended conditions of consent are sufficient to ensure that meteorological monitoring would be undertaken in a manner in line with approved NSW methods and consistent with the requirements of the development consent and EPL.

With respect to low frequency noise, the EPA noted that the noise impact assessment had not applied correction factors and highlighted that it was the MACH Energy's risk if a low frequency noise issue was to arise at a later date during operations. The RTS recognised the EPA's comments on the application of low frequency modifying factors and noted that MACH Energy does not anticipate low frequency noise will be a significant operational concern, given the application of contemporary assessment methodology and learnings from other mines operating in NSW. Should any unforeseen generation of low frequency noise occur, the Department has included processes that would ensure that outcomes consistent with those recommended by the EPA would be achieved.

While the Assessment Report reiterates the importance of the EPA's request for further consideration of exceptional meteorological conditions as part of any monitoring program, based on its experience in this area, the Department concurs that low frequency noise is unlikely to be significant challenge for the Mount Pleasant mine. Notwithstanding, the Department has recommended the inclusion of notes to the Project Specific Noise Limits clarifying that noise generated by the development is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the *NSW Industrial Noise Policy*, subject to the application of modifying factors under *Fact Sheet C of the Noise Policy for Industry*.

Furthermore and to ensure the EPA's requirements are appropriately conditioned, the Department recommended conditions of consent reflecting the requirements of the VLAMP, requiring monitoring to account for the possibility of noise enhancing conditions (eg noise being deflected over the eastern site boundary due to wind or temperature inversions) and requiring that this real-time noise monitoring is used to inform proactive and reactive management measures (such as optimised operational shielding and noise attenuation of mobile plant and equipment).

Overall, the Department is satisfied that the Assessment Report's recommendations were informed by a contemporary noise impact assessment and the recommended conditions of consent appropriately address the matters raised in the EPA's submission and comments on the RTS.

Water Management

Lock the Gate has expressed concerns over the consideration of matters raised by the EPA and NSW Health regarding the mine's proposal to discharge water into the Hunter River, the ability to licence these discharges and potential impacts on Muswellbrook's drinking water supply.

The EPA's submission on the modification identified several discrepancies and inconsistencies in the water management schematics contained in the EA, which indicated that a number of dams had the potential to overtop and flow to surrounding watercourses, should design criteria be exceeded under extreme weather events. The EPA requested that MACH Energy clearly identify the water management system to be implemented at the site and provide further information around the frequency, volume and expected quantity of water to be discharged to the environment, as well as the expected quality and quantity of water in the receiving environment during discharge events. The EPA also requested that MACH Energy consider the prioritisation of alternative sources for operational water use (such as reclaimed water), rather than drawing water from the Hunter River.

In response, the RTS acknowledged errors in the drafting of the Water Management System diagram in the EA and provided an updated figured which clarified that no spills were expected from the higher risk fines emplacement area and mine water dam. With regard to sediment dam discharges, the RTS clarified the proposed modification is not seeking to change the nature or design criteria for sediment dams relative to the current approval and referred to detailed design criteria for these dams contained in the site's existing Erosion and Sediment Control Plan.

MACH Energy also noted that the identified sediment and environmental dams would be constructed to meet the guidelines *Managing Urban Stormwater, Soils and Construction Volume 1* (Landcom, 2004) and *Managing Urban Stormwater, Soils and Construction*, *Volume 2E – Mines and Quarries* (Department of Environment and Climate Change, 2008), and acknowledged that discharges would only be allowed if licences could be obtained and the dams could be constructed to comply with section 120 of the *Protection of the Environment Operations Act* 1997. MACH Energy committed to continue to work with the EPA about these matters as part of any update to its existing EPL.

Having recognised the above matters, Section 5.3 of the Assessment Report discussed the likely discharges and management control measures for the various water storages proposed on site. Figure 2 of the Assessment Report shows these storages, including sediment dams SD 1, SD 3 and SD 4 along the east of the site, the rail loop dam (RLD) and discharge water dam (DW1) in the Dry Creek catchment south of the site. The Department also recognised that these dams may discharge to

the Hunter River via Rosebrook Creek or Dry Creek (as shown in the water management schematic at Figure 6 of the Assessment Report). Further, the report acknowledged that the separate Bengalla consent (SSD 5170) already has approval to construct a future water discharge system (including DW1) that would traverse the Bengalla site and (if licensed) then discharge to Dry Creek, thereby linking Mount Pleasant discharges to the Hunter River.

Having considered the proposed design features and water management infrastructure, the Assessment Report concluded that Modification 3 would not significantly alter the approved mine design with respect to surface water management. The Department's assessment also recognised that MACH Energy agreed to consider the EPA's recommendation of pursuing alternative water supply options but cautioned (that for operational continuity reasons) it could not rely solely on surplus water availability from other nearby mining operations or industrial sources.

The Department acknowledges that EPA's comments on the RTS clearly state that it would require further detailed information before it could consider licensing any discharges from the site under the *Protection of the Environment Operations Act 1997* (POEO Act). In relation to this matter, the Department's assessment report noted that MACH must comply with the provisions of the POEO Act and *Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002*, including obtaining any necessary EPL and Hunter River Salinity Trading Scheme credits, and that these licences and credits must be in place prior to any water discharges.

The Department maintains that if has provided sufficient information and detail to enable determination of the modification application, including details of the proposed design and operational features, potential mitigation measures and contingency approaches to prevent unlicensed discharges. Any further detail around water treatment or management measures needed to facilitate licensed discharges can be appropriately managed through the post approval regime, including the Water Management Plan and rigorous requirements imposed by the EPA prior to approving any amendment to the site's EPL. In the event that the EPA does not approve a variation to the EPL, Mount Pleasant would not be able to discharge and the mine would have to adapt its water management strategy accordingly (e.g. pumping to ensure no discharge during wet weather).

With the above environmental protection measures in place, the Department is confident that any approved discharges entering receiving environments along the Hunter River would not materially affect drinking water supplies, as any water discharges must comply with section 120 of the POEO Act which prohibits the pollution of waters. Further, NSW Health's submission identified additional regulatory protection for drinking water and noted that any proponent found to be not complying with the requirements for drinking water suppliers to develop and adhere to a quality assurance program of the *Public Health Act 2010* and the *Public Health Regulation 2012* could be subject to penalties of up to $27,500. The Department supports this advice, but notes that this operational and compliance matter should likewise be addressed as a post-approval management matter. Additionally, the Department notes that MACH Energy has confirmed that potable water would be trucked to site in the first instance and that, if treated Hunter River water is used in future, a quality assurance program would be developed that is consistent with NSW regulatory requirements.

Finally, the Department highlights that in making a recommendation on the acceptability of the modification, it has carefully considered the existing and recommended conditions of consent. These conditions include requirements to:

- implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development (condition 1 of Schedule 2);
- ensure that sufficient water is available for all stages of development, and if necessary, adjust the scale of mining operations on site to match the available water supply (condition 25 of Schedule 3); and
- ensure that any surface water discharges from the site comply with the discharge limits (both volume and quality) set for the development in any EPL or the relevant provisions of the POEO Act or *Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002* (condition 26 of Schedule 3).

The Department considers that the recommended conditions provide appropriate protection to the environment and local community and appropriately address matters raised in advice from regulatory agencies.