

26 June 2013

Mr Clay Preshaw
A/team Leader, Mining Projects
NSW Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

By email: clay.preshaw@planning.nsw.gov.au

Dear Mr Preshaw

Re: Wallarah 2 Coal Project SSD 4974.

Thank you for the opportunity to review the Environmental Impact Assessment for this project. The Central Coast Public Health Unit (PHU) has consulted with the NSW Ministry of Health Environmental Health Branch in preparing this response. The PHU would like to provide the following comments.

Air Quality

The PHU notes that modelling predicts that incremental dust deposition and TSP, PM10 and PM 2.5 concentrations at the closest residential receivers are below impact assessment criteria. We also acknowledge, as does the health risk assessment, that adverse health effects occur with an increase in particulate pollution, even at levels below the current assessment criteria.

Our comments are made assuming the appropriate model and assumptions have been used. Particulate pollution (PM10 and PM2.5) are shown in figures 8.1 to 8.6 in Appendix L. They appear to show lower incremental particulate concentrations affecting the community than the previous EIS (2010). It is assumed that part of this may be due to the improved mitigation measures included in the model's assumptions since the previous EIS. It still remains that particulate pollution will be elevated beyond the boundaries of the proposal, which increases the risk of adverse health effects for people exposed to increased levels of particulate pollution. Therefore, should this project be approved, a condition of approval must be that best-practice particulate control measures are implemented, maintained and monitored.

The Health Risk Assessment (Appendix M) estimates 1.1/100,000 additional deaths per year due to increases in particulate pollution. It estimates an increase in daily hospitalisations for cardiovascular disease and respiratory disease to be 0.008 and 0.016 respectively, per 100,000 population. However, from the information provided in the methods section of the PM2.5 assessment, there are at least two significant errors that bring into question the validity of the results:

1. The concentration response functions (CRFs) reported in table 3.1 and 3.5 relate to particular age groups. For example, the CRF for all-cause mortality has been taken from a study of people aged over 30 years and the CRF for hospital admission with cardiovascular disease is taken from a study limited to people aged over 65 years. However, from table 3.9, the CRFs have been applied to the whole population. This error is likely to have greatest impact on the results of the cardiovascular hospitalisations rate, because the baseline rate of hospitalisation for cardiovascular disease will be substantially larger among people aged >65 than the rate in the whole population.

2. The daily hospitalisation rate for cardiovascular disease is reported as 1.04 per 100,000 in table 3.9. This is at odds with the rate presented on the Health Statistics NSW website, which reports the annual 2006-07 cardiovascular disease hospitalisation rate as 2270.7 per 100,000 for the Central Coast LHD and 2139.5 for the rest of NSW. These annual rates translate to daily rates of 6.21 per 100,000 and 5.86 per 100,000 respectively.

The second error means that the reported increased risk of cardiovascular hospitalisations is at least a six-fold underestimate and the first error mean it is probably several-fold more than this. It is likely that the revised estimate of increased hospitalisations due to increased air pollution will be greater than the estimated increase in mortality.

Attention is also drawn to figure 3.1 in Appendix M, where the 'pyramid' of health impacts shows that it is expected there as health events become less serious, they are likely to be more frequent. It is therefore likely that for an exposed population, less severe health outcomes will be more prevalent than deaths and hospitalisations. People exposed to particulate pollution are likely to experience symptoms of airways irritation – cough, runny nose, irritated eyes. Some will develop localised inflammation, for example, sinusitis or bronchitis and may require medical treatment. People with asthma may experience exacerbations due to particulate or other types of air pollution.

If the modelling is correct, and air pollution control measures are used effectively, then the size of the population exposed to increased air pollution will be relatively small. It is however noted that there are existing communities within 3 or 4km to the east of the surface facility (Bluehaven, Lakehaven, Gorokan – over 25,000 people), and the proposed Warnervale Town Centre will see a further 50,000 people living only 3 or 4km to the south east of the surface facility. These newer areas tend to attract young families. Children are susceptible to adverse health effects from air pollution because of their higher rate of asthma (about 20%). If the proposal were to go ahead, there should be appropriate levels of monitoring, and safeguards for the community. Consideration may be given to acquiring properties adjacent to the surface facility and exposed to incremental air pollution from this development.

The proposal to augment or replace the existing HVAS with continuous PM10 and PM2.5 monitoring instruments is commended. An air quality monitoring program that is comprehensive and representative of project emissions is required to ensure the project does not create impacts on the health of the community. PM10 and PM2.5 monitoring is required in locations which can be left in situ to enable annual average values to be obtained. The PHU encourages licencing conditions to ensure ongoing and comprehensive monitoring of PM10 and PM2.5 and effective response to any air quality criteria exceedance or significant increase in air pollution below criteria. The PHU seeks confirmation from the Office of Environment and Heritage that the eventual Air Quality Management Plan is appropriate.

Water and Sewerage

The intent to connect water and sewerage services at both sites to Council's reticulated systems is noted. It is assumed that water supplies to employee amenities will be sourced from the town water supply. The proponent is advised to ensure that potable supplies for use during construction (likely to be sourced from water carts) meet the relevant criteria of the *Australian Drinking Water Guidelines*. The proponent should consider the NSW Health *Private Water Supply Guidelines* in the management of this temporary supply.

The undertaking to obtain all relevant approvals is also noted. The proponent will need to ensure that required approvals are obtained, including with regard to the Water Treatment Plant to be used to treat mine water. In particular, should any on site reuse of waste water be planned, the proponent is advised to consult with the NSW Office of Water and the Independent Pricing and Regulatory Tribunal to ascertain whether any approvals are required. Consultation with the PHU is required should any reuse options involve potable uses, including connection to employee amenities.

The commitment to repair and/or redrill damaged groundwater bores is noted. Realistic assessment and response protocols are required to ensure that project related impacts are accepted and managed as such.

Drinking Water Supply

The Central Coast's drinking water supply has been enhanced recently with a major pipeline to Mangrove Dam. The Wyong River and its major tributary, Jilliby Jilliby Creek, are part of the supply, feeding into Wyong Weir, from where water is pumped. The analysis of streamflows (table 2.8 and 2.9, Appendix J) shows average annual volumes of 22,532ML for Jilliby Jilliby Creek and 39,071ML for Wyong River upstream from Jilliby Jilliby Creek. Jilliby Jilliby Creek contributes of the order of a third of Wyong River's flow as it nears the weir.

It is proposed to underground mine beneath Jilliby Jilliby Creek, and it is noted the subsidence impact zone includes Wyong River in part. The Public Health Unit seeks confirmation from the Office of Water that the Central Coast's water supply is protected, and is not at risk of compromise from this proposal. Drinking water is fundamental to human health, and the Central Coast's drinking water supply needs to maximise the human and natural infrastructure for current and future population growth.

On site Waste Management Systems

The increased incidence of flooding at various residential properties may require measures to ensure that on site waste management systems (for example septic tanks) do not pose a health risk due to inundation. The proponent should undertake to ensure this risk is managed.

Noise assessment

It is noted that the EIS asserts that the project specific noise criteria will be met. The PHU seeks confirmation from the Office of Environment and Heritage that the criteria, assessment and the eventual Noise Management Plan are appropriate. The proponent will need to ensure that appropriate criteria are met for the life of the project, given the residential expansion planned for surrounding areas. The PHU encourages licencing conditions to ensure ongoing compliance and avoidance of noise nuisances.

It is noted that rail noise, while not expected to result in increases above existing levels, will result in a minor increase in the 24 hour noise level along on the Main Northern Rail line. Although the increase is small, there remains potential for intrusive noise to create a nuisance and lead to adverse health effects, particularly at night. This increase in noise from an additional average of 4.3 rail cycles per day (6 days a week) will affect households and businesses along the rail line for the Central Coast and the Hunter. The cumulative impact from the increased rail movements should be considered in relation to Newcastle's population, from a noise (human health) and traffic perspective.

In evaluating the potential for noise and air quality impacts, the PHU seeks confirmation from the proponent that the assessment, (including modelling) has considered the potential effects from coal being brought to the Toohey's Road site by third parties.

Resident Feedback

Residents must have a contact point for complaints if noise or air quality issues occur. The proponent should guarantee a prompt and genuine response to any complaints, regardless of the matter.

In conclusion, we note that modelling predicts no significant exceedance of air quality and noise goals. However research indicates that in some instances, for example air quality and noise, there may be health effects even at exposures below guidelines. Additionally, significant health outcomes can arise if guidelines are not met. Accordingly, should the project proceed, we encourage appropriate controls to ensure that adverse impacts are avoided.

If further information is required, please contact me on telephone 4320 9741 or 4320 9730.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Peter Lewis', with a stylized flourish at the end.

Dr Peter Lewis
Director Public Health