



Mr P Freeman
Senior Planner
Mining Projects
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Our Reference: MP-SSD-5156
Your Reference: SSD 5156
Contact: Robyn Shelley
Telephone: 6591 7345

25 October 2013

Dear Mr Freeman

**ROCKY HILL COAL PROJECT (SSD 5156)
EXHIBITION OF ENVIRONMENTAL IMPACT STATEMENT**

I refer to your email dated 23 August 2013 in relation to the exhibition of the Environmental Impact Statement for the Rocky Hill Coal Project.

The matter has been discussed with Council staff and their responses are attached to this letter.

Please contact Mr Wayne Burgess, Manager Development Assessments on 02 6591 7292 if you have any further enquiries.

Yours faithfully



Robyn Shelley
Senior Development Assessment Planner
Planning & Environmental Services



TO Wayne Burgess, Manager Development Assessment

CC

FROM Wade Holmes, Traffic Engineer

DATE 25 October 2013

SUBJECT Rocky Hill Coal Project – Heavy Vehicle Movements

I refer to the supplied Traffic Impact Assessment (TIA) for Rocky Hill Coal Project, and the impact of heavy vehicles on roads under the care and control of Great Lakes Council (namely Bucketts Way).

The TIA indicates that the development will generate a maximum of 8 heavy vehicles per day (at year ten of the development). The TIA estimates that these will be split with 1 heavy vehicle heading south on Bucketts Way and the remaining 7 heavy vehicles split towards Gloucester via various routes.

The directional split estimated by the TIA is inconsistent with previous TIA's completed for the coal mines of Duralie and Stratford. The TIA for Duralie (latest extension) indicated that existing heavy vehicles access the site in a 60% south (Bucketts Way) / 40% north (Gloucester) split. The TIA for Stratford indicated that existing heavy vehicles access the site in a 85% south (Bucketts Way) and 15% north (Gloucester) split.

It is recommended that the conservative estimate of a 60% south (Bucketts Way) and 40% north (Gloucester) split is applied to the Rocky Hill Coal Project, and that Council does not agree with the split nominated by the TIA.

Given this new split of 60/40, there will be 5 heavy vehicles per day that access the site along Bucketts Way along roads which are under the care and control of Great Lakes Council.

Upgrade of Bucketts Way

The submitted TIA indicates that future years will see an increase of traffic and heavy vehicles along Bucketts Way. The RMS Guide To Traffic Generating Developments specifies a level of service that is desirable for the operation of rural roads based on the peak hour flow of a two lane road and the percentage of heavy vehicles. If the level of service is exceeded it is recommended that additional overtaking lanes are provided along the road.

It is noted that the TIA indicates that after ten years of operation (2022), heavy vehicles will make up 12% of traffic and daily volumes will be 3,884. Assuming a peak hour flow of 0.9 for Bucketts Way, this will mean a peak hour flow of 350 vehicles, and a level of service of D for Bucketts Way. The RMS Guide recommends that a level of service of C for major roads, indicating that after ten years an additional overtaking lane would be required.

Council has undertaken cost estimates for the upgrading of Bucketts Way including the addition of overtaking / passing lanes in several locations. The provision of overtaking lanes at the Wisemantles Road section has been estimated at \$2,700,000. The main justification of the need for overtaking lanes has been the increase of mine developments which access Bucketts Way. It is noted that this would be the 3rd major mine development in the region.

In order to create a fair and equitable way for Council to recover the cost of construction of the overtaking lanes, it is proposed that each mine pay 1/3 of the estimated cost. In this instance, I recommend that the development pay a contribution of \$900,000 towards the construction of overtaking lanes. It is noted that the lanes will not be required at the initial start of the mine, but will be required at year ten. As such, I would recommend that payments are made each year for ten years. The development should pay Council **\$90,000 per year for ten years** towards the upgrade of Bucketts Way.

Maintenance

The Duralie Coal Mine pays council a maintenance contribution to Council to cover costs associated with maintenance of Bucketts Way and for annual bridge inspections. This payment is based on the number of heavy vehicles that the mine generates. Currently, the Duralie mine pays Council an annual contribution of \$59,688.09 for maintenance and \$11,022.58 for bridge inspections. This mine contributes 36 heavy vehicles and as such their contribution is \$1,964.18 per truck (2010 figures).

As this development is proposing 5 additional heavy vehicles, it is recommended that Council seek an additional **\$9,820.90** per annum (2010 figures) for maintenance and bridge inspections.

Wade Holmes
TRAFFIC ENGINEER

Noise

Concerns relating to increased noise associated with coal train movements on the North Coast Railway Line have been raised by Council in relation to the 'Duralie Rail Hours Modification' and the 'Stratford Extension Project'. The Rocky Hill Coal Project increases Council's rail noise concerns as an additional six train movements (during the day or night) are proposed.

The Noise Vibration and Blasting Assessment prepared by Wilkinson Murray Pty Limited (dated April 2013) for the Rock Hill Coal Project considers rail noise against two sets of noise criteria, being:

1. The New South Wales (NSW) Environment Protection Authority's (EPA) rail noise guideline '*Environment Assessment Requirements for Rail Traffic – Generating Developments*' (EARRTGD) dated 26 February 2011. It should be noted that this criteria has recently been amended and is now included as 'Appendix 2' in the NSW EPA's '*Rail Infrastructure Noise Guideline*' (RING). These guidelines contain noise levels, which are referred to as 'trigger levels'. When the 'trigger levels' are likely to be exceeded by a proposed rail development, mitigation measures need to be considered to reduce the predicted noise levels.
2. Australian Rail Track Corporation Ltd's (ARTC) Environment Protection Licence (EPL No. 3142), which regulates operational noise emissions from the North Coast Railway.

A summary of the noise criteria used by Wilkinson Murray Pty Limited to assess the proposed modification, along with those contained in the EPA's RING are included in the table below:

	L _{Aeq} , 24hr	L _{Aeq} , 15hr (7am – 10pm)	L _{Aeq} , 9hr (10pm – 7am)	L _{Amax}
EPA Assessment Guidelines (mitigation measure trigger levels)				
EARRTGD	60 dB(A)	N/A	N/A	85 dB(A)
RING	N/A	65 dB(A)	60 dB(A)	85 dB(A)
Environment Protection Licence				
No. 3142	N/A	65 dB(A)	60 dB(A)	85 dB(A)

In addition to the noise level criteria outlined in the above table, the NSW EPA's EARRTGD and the EPA's RING classifies a "project related noise increase" as an increase of more than 0.5 dB(A) over the assessment period(s). Where an increase of more than 0.5 dB(A) over the day or night periods is identified, and where the cumulative noise level (of existing and proposed operations) exceeds the noise assessment trigger levels, then the EPA'S RING stipulates that all feasible and reasonable mitigation measures should be implemented.

Wilkinson Murray Pty Limited predictions show that rail noise level increases between 0.5dB(A) and 1.1dB(A) are likely as a result of the Rocky Hill Coal Project. As the cumulative rail noise levels of the Rock Hill Coal project exceed trigger level and a noise level increase greater than 0.5dB(A) is predicted, an assessment of all feasible and reasonable mitigation measures should be undertaken.

Further, considering that ARTC's EPL states '*it is an objective of this licence to progressively reduce noise levels to the goals of 65dB(A)Leq, (daytime from 7am - 10pm), 60 dB(A)Leq (night time from 10pm - 7am)*' a commitment outlining proposed measures to achieve these goals should be provided. The 'Duralie Rail Hours Modification', the 'Stratford Extension

Project' and now the 'Rocky Hill Coal Project' have all been shown to have increased noise levels associated with an already non-compliant North Coast Rail Line.

Air Quality

Council is concerned about air quality and dust emissions from the proposed Rocky Hill Coal Project for both local residents within the immediate vicinity of the mine and throughout the region due to the potential cumulative impact of the proposed Rocky Hill mine and Stratford and Duralie mines. In addition to the potential for residents to inhale dust and emissions from the operations, Council is also concerned about deposition of dust from the mining operations and the potential for heavy metal and hydrocarbon contamination of resident's rainwater tanks.

Council has also had contact with and listened to concerns raised by residents from the Wards River area in relation to dust associated with the transportation of coal on the North Coast railway. Residents have advised of the frustration associated with the deposition of coal dust on dwellings in the Wards River area as coal is transported in uncovered wagons in extremely close proximity to dwellings.

The Rocky Hill Coal Project would add to the concerns of residents in this area as the approval of the application would result in an additional six train movements passing by their doorstep each day. As has occurred with the Hunter Valley rail line, Council requests that dust monitoring stations be installed along the North Coast Railway Line in the vicinity of Wards River, should approval be granted to the Rocky Hill Coal Project. Results of the monitoring should be reported to the NSW EPA and residents.

Mining Projects
Attn: Mr Paul Freeman
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Our Reference:
Your Reference: SSD - 5156

Contact: Mr Mat Bell

Telephone: 6591 7243

25 October 2013

Dear Mr Freeman,

Re: Comments to the Proposed Rocky Hill Coal Mine, Gloucester (SSD-5156)

Background and Intent of this Submission

This correspondence has been prepared in response to your e-mail dated 23 August 2013, in which the Department is seeking comments to the proposed establishment of the Rocky Hill Coal Mine at Gloucester, including any recommended conditions of consent should the proposal be approved.

This submission relates to ecological matters.

It is important to note that the site of the proposed Rocky Hill Coal Mine is not located within the Great Lakes Local Government Area (LGA) (and is confined to the Gloucester Shire Council LGA). It is however in the locality of the northern Great Lakes LGA boundary. Given this proximity, there may be a degree of biodiversity-related impacts on the biodiversity and ecological condition and function of lands within the Great Lakes LGA associated with this proposal. This is particularly so in relation to Council's regional biodiversity planning and the cumulative effects of coal mine and coal seam gas developments in this part of the Gloucester Basin.

Given the above, the submission seeks to comment on the appropriateness and reasonableness of the proposed development on local and sub-regional ecology, assess the manner in which the development potentially impacts regional and sub-regional connectivity and ecological resilience and discuss the cumulative impacts of the proposal in relation to biodiversity and ecology.

Technical Review of the Ecological Assessment

Council's Ecologist, Ryan Sims has evaluated the Ecological Assessment prepared by Ecotone Ecological Consultants from a technical perspective. In summary, Mr Sims has noted the following:

Project Design

- The site boundary extends beyond the terrestrial biodiversity Study Area (see Figure 2). It is therefore assumed that a part of the site boundary area was not assessed. On Figure 3, it can be identified that there are proposals for several power-line corridors and an indicative energy substation in this area, which was apparently unsurveyed.

Survey Design

- Some threatened flora species that are likely to occur were not targeted during optimal detection periods. For example, *Asperula asthenes* should be surveyed in early Spring during its flowering period. Surveys were undertaken in July and August, not September onwards.

Vegetation Communities

- Vegetation Community 3: River Oak/ Cabbage Gum/ Broad-leaved Apple Riparian Forest (riparian forest), from a preliminary assessment of its habitat and composition, appears to conform to EEC River-flat eucalypt forest on coastal floodplains of the NSW North Coast, Sydney Basin and South East Corner bioregions. This community was not identified as such by the author of the Ecological Assessment. Further, it was not even considered to be regionally significant. There are many published references about the level of depletion of this (or equivalent forest types), the paucity of representation in conservation reserves and the general regional and State significance of this forest type. A precautionary approach should have been adopted, which would weigh the conservation of this type more reasonably.
- Further to the above, it is my opinion that vegetation assessment against Biometric Vegetation Types data should not be the sole tool to identify endangered ecological communities (EECs). Thorough assessment of floristics against at a minimum, NSW Scientific Committee's Final Determinations, should be undertaken.

Fauna

- It is my opinion that the impact assessment of known threatened species is inconsistent with assessment guidelines. The Grey-crowned Babbler and Squirrel Glider have been identified as subject species that will be impacted by the project. Ecotone Ecological Consultants purport that the project has the potential to affect the species' [Squirrel Glider] lifecycle by causing a change in foraging behaviour, roosting behaviour, displacement of individuals, disruption of the social structure and potential mortality. It also concludes that even with impact mitigation measures recommended to improve connectivity it is possible that the project could have an adverse effect on the local population. The viability of these local populations is considered tenuous by Ecotone, yet, despite the threats and pressures associated with the proposal, Ecotone then claim that the project is unlikely to have a significant effect on any subject threatened species. This may under-represent the true

magnitude of risks associated with the proposal. The Grey-crowned Babbler is similarly, potentially-impacted.

Recommendations

- The Squirrel Glider and Grey-crowned Babbler are likely to be adversely effected, as identified above. More extensive mitigation measures based on the avoid - mitigate - compensate decision hierarchy. As such, additional measures or design should be implemented, starting with the feasibility of avoidance. The viability of these populations are already precarious and would be very sensitive to potential impacts. In the absence of data to prove otherwise, the Squirrel Glider and Grey-crowned Babbler must be managed as if they are present in viable, long-term populations, on the project site.

Biodiversity Offsets

- In my opinion, the Offset Strategy appears to be constrained with regards to OEH's Offset design principles and industry best management practice standards.
- Further to the above, I feel that the project seeks to offset habitats occurring in different parts of the landscape to that proposed to be impacted. This is clearly portrayed in Figure 4 of Volume 10 Soil Landscapes of the study area. The bulk of the impact area occurs on undulating hills on Permian sediments and less extensively on alluvial plains along floodplains and coal measures lower and mid slopes. Offset areas occur on largely volcanics which occur on the mid and upper slopes of the landscape. Consequently, improve or maintain outcomes are heavily constrained. The offsets appear to be driven more so by least cost/ availability rather than a meaningful contribution to long-term management of biodiversity values in this sub-region.
- If Vegetation Community 3 is in fact an EEC, or at least regionally significant, it is my opinion that a proposed 2.38:1 offset ratio is inadequate.
- It is likely that the key threatened species that are known to occur and are known to be impacted are not adequately compensated for in offsets. No known habitat has been recorded – in the form of sightings – for offsets for Squirrel Glider and Grey-crowned Babbler. This appears to be unreasonable and inappropriate and would result in real depletion of local populations of threatened species.

We bring the above technical issues to the attention of the NSW Office of Environment and Heritage and the Department of Planning and Infrastructure in their assessment and determination of the proposal.

It is critical that the Department satisfies itself (and seeks the views of agency or independent experts as part of this process) of the responses to the technical issues raised above to demonstrate compliance with the relevant legislation and to deliver an adequate determination of this development proposal.

Broad Ecological Context

In the broader context, Great Lakes Council is developing the Tops to Lakes Initiative, which seeks to reinstate and protect connected landscapes and enhance the quality and integrity of natural landscapes to provide environmental services provisions. We recognise that partnership with surrounding Local Governments is critical in delivering the proposed aspirations and visions of this Draft initiative. Relevantly, any decisions relating to this proposal (by way of either a refusal or a conditional approval) of the proposed activity need to recognise the existence and aspirations of Council's Draft Tops to Lakes Initiative and its aspirations.

One of the key goals of the Tops to Lakes Initiative is the establishment and protection of a connecting corridor(s) of functional, resilient natural vegetation between The Glen Nature Reserve (and associated habitats) and the foot-slopes and ranges of Barrington Tops area (via Chichester and Avon River State Forest). This is located in the vicinity of the Wards River and Avon River watersheds and the southern parts of the Gloucester Local Government Area.

Coal mining in the Gloucester Basin cumulatively presents both a challenge and an opportunity to the achievement of this goal.

Coal mining, cumulatively, has the potential to further fragment and sever connecting habitats and make the large-scale restoration of connecting habitats and functional natural areas in the landscapes south of Gloucester practically unfeasible and unachievable. However, the strategic planning of coal mines and their associated offset areas and restored perimeter lands represents an opportunity to deliver the connectivity and ecological enhancement/ restoration that is required. This depends however on proactive, committed and strategic planning of coal mines and their associated offset lands. It also requires the timely delivery of offset requirements, in both a practical sense (ie. revegetation of degraded or modified areas) as well as in an administrative sense (public dedication, environmental zoning, conservation mechanisms, etc). Consent authorities and the community need to be assured that conservation outcomes are effectively and appropriately delivered, and managed and secured in perpetuity.

Biodiversity offsets need also consider the long-term sustainability of agricultural production land uses in the local area. This can only be considered in a strategic sense.

We remain concerned (as per our previous submission on the Stratford Coal Mine extension) that there is an inadequate strategic basis for the determination of coal and coal seam gas proposals and as such, the cumulative risks are difficult to consider and resolve in relation to proper biodiversity conservation and management.

The strategic assessment of biodiversity values and goals in the Gloucester Basin should be addressed via a working group of relevant Local Government and agencies.

Thus, should the Department (despite the technical ecological deficiencies we have raised) deem that the proposal be positively determined, we would ask that the finalisation of all spatial, temporal and administrative details associated with the footprint (avoidance) and offsets for the proposed development be a Deferred Commencement Condition that requires the formation and endorsement of a Final Layout and Offset Strategy, which includes input, review and acceptance of the Strategy by a

convened Agency Panel that includes (but is not limited to) Great Lakes Council, as well as NSW Office of Environment and Heritage and Gloucester Shire Council.

We note that it is important that the true ecological risks and threats of the proposal be clearly understood by the agencies in formulating a decision in relation to this proposed mine.

The Submission of Gloucester Shire Council

We would note that Gloucester Shire Council is likely to provide commentary to this proposal. We strongly urge that any ecological commentary within that submission be read and clearly considered by the Department and other relevant agencies.

The Adequacy of Proposed Offsetting Arrangements

In particular, I would reiterate our above stated concerns relating to the spatial location of the offset areas (should the proposal be positively determined) nominated in the EA and raise the issue that the specific details of any offset need to be adequate in area, biodiversity outcome, security and long-term management.

It is not, in our opinion reasonable to proffer an offset landscape that is geophysically and biologically very different to the area of disturbance.

Thus, we say, should the development be positively determined, any offset areas must be appropriately located, secured in a timely, effective manner, proactively managed for biodiversity restoration and conservation and maintained in-perpetuity. The proposal firstly appears to fail to protect in situ features of significance that are vulnerable to direct impact (Squirrel Gliders and Grey-crowned Babbler), but also appears to fail to deliver adequate offsets in terms of location and effectiveness of conservation mechanism and actions. Novel approaches to effective conservation should be further explored (eg. public dedication of the conservation area with the provision of funding for conservation and restoration, combined with agency and conservation NGO partnership for the long-term management of the offset areas). This issue must be addressed through the consent process, should the proposal be positively-determined.

The shape and spatial location of the final offset areas must be devised to reflect cumulative ecological restoration aspirations that are practical and effective. To a degree, the existing offset areas appear to be defined through convenience rather than outcome.

Further, we say that if the development is positively determined that:

- The critically important Offset Management Plan that would define and manage the offset area be finalised only through involvement, input and endorsement by Great Lakes Council, Gloucester Shire Council and the NSW Office of Environment and Heritage. The native revegetation of the derived grassland parts of the proposed offset area need to be very clear about aspirations concerning climax vegetation community types and the means to achieve rationally and appropriately. Such climax vegetation community types would need to be reflective of indigenous community types considering the inherent soil, topographic and landform. Re-creation of functional and resilient, self-sustaining native vegetation from derived

grasslands can be very complex and needs very prescriptive action plans to give effect to such to ensure project success.

- As part of the finalisation of the offset areas should the proposal be positively determined, there should be further scientific analysis of the functional avenues of local or sub-regional wildlife connectivity for the proposed offset areas and their contribution to agency and community aspirations. Greater attention to local connectivity opportunities and constraints and sub-regional wildlife corridor targets is required and should be utilised to place a revised offset area into a more effective, broader landscape context with regards to faunal connectivity. This should include reference to key regional corridors, the climate change adaptation corridors projects and aspirations by the relevant Local Governments. In a sub-regional context, the locality of the proposal occupies land between larger networks of remnant native vegetation, including conservation reserves associated with the Avon River State Forest/ Berrico Nature Reserve to the west and associated with The Glen Nature Reserve (and surrounding vegetated privately-held lands to the east. The Avon and Wards River Valleys (and associated tributaries) contain few conservation reserves, despite being recognised as a potentially important area for key regional corridors and/ or climate change adaptation corridors. The conservation offset arrangement proposed as part of this project should strongly consider wider landscape scale in its design process.
- The approved Offset Area Management Plan should consider issues associated with fencing, methods of active revegetation, management of weeds and pests, management of fire, signage and restrictions on access, as well as the relocation of habitat features such as hollows and logs and performance measurement and monitoring . Further, it should discuss pre-clearing capture and translocation of pertinent threatened fauna species from the disturbance area, which may be essential to avoid harm to individual species and serious loss of local populations. Further, it should program the compensation (at least on a 1:1 basis) of the loss of natural hollows from the disturbance area through a relocation of felled trees or artificial nesting box program and define the relocation and placement of other habitat furniture (rocks and fallen timber) into revegetation areas as cover for dependent fauna and to aid nutrient cycling and macro-invertebrate populations.
- The offset arrangement needs to adequately consider the time delay between clearing and the recreation of climax habitat across the derived grasslands of the offset area and provide details as to the staging of revegetation and enhancement works or the techniques to achieve such revegetation.

Identified shortfalls to the company's provision of adequate offsets may benefit from the development of an annual cash contribution that is proffered by the company and required in consent conditions to Gloucester Shire Council for the purpose of a sub-regional conservation acquisition and management and/ or catchment management program in a manner that is similar to such negotiated between Duralie Coal and Great Lakes Council. However, this should not be in lieu of proper avoidance and offsetting arrangements initially.

Reference to the Duralie Extension NSW LEC Judgment

The Department should obtain a copy and consider this application in light of the published decision by the NSW Land and Environment Court relating to the Duralie Coal Mine Extension. This is particularly pertinent with regards to acceptable offsetting and rehabilitation management and planning.

Concluding Remarks

This is a significant proposal that will cause the clearing and loss of a large area of patchily distributed native vegetation, affects local populations of a number of threatened species and removes and modifies area of habitat for biodiversity.

This correspondence highlights that there are outstanding and pertinent ecological concerns that should be adequately considered by the authorities ahead of formal, positive determination.

In my opinion, much work needs to be completed and considerable consultation and liaison needs to be established before it can be concluded that a reasonable and satisfactory development is occurring and that ecological impacts (at a subject, local and sub-regional scale) are appropriately avoided, mitigated or compensated.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Mat Bell', written over a faint circular stamp or watermark.

Mr Mat Bell

Senior Ecologist – Great Lakes Council