3 May 2016
DOC16/164930-18

Mr Stephen O'Donoghue
Team Leader – Planning Services, Resources Assessments
Department of Planning & Environment
Stephen.o'donoghue@planning.nsw.gov.au

Dear Mr O'Donoghue

**Bylong Coal Project – Response to Submissions – OEH Comments**

I refer to the email from Matthew Riley of 1 April 2016 inviting the Office and Environment and Heritage (OEH) to provide comments on the Response to Submissions (RTS) for the Bylong Coal Project.

OEH understands that the project is to be assessed as a transitional project under the *NSW Biodiversity Offsets Policy for Major Projects.* We also understand that it will be assessed under the bilateral agreement between the NSW and Commonwealth Governments made under the *Environment Protection and Biodiversity Conservation Act 1999.*

Prior to the Environmental Impact Statement (EIS) public exhibition stage, the Proponent committed to undertake a full assessment using the Framework for Biodiversity Assessment (FBA), to be completed and submitted with the Response to Submissions. The FBA assessment has been provided as part of the RTS documents. While there are some remaining deficiencies in the impact and offset assessment and the Biodiversity Offsets Strategy (BOS), OEH expects that the proponent will continue to work with the Department of Planning and Environment (DP&E) and OEH to resolve outstanding issues.

OEH has not conducted a detailed review of the BOS as the BOS has used indicative data, at least in part. OEH considers that the use of indicative data is sufficient at this stage of the assessment process, but notes that further assessment of the offset sites may be required to meet the minimum survey requirements of the FBA at offset sites.

Please note that OEH has not yet reviewed the Bylong Coal Project against the Bilateral Agreement relating to environmental assessment between the Commonwealth and the State of NSW. This will be conducted and the assessment provided to DP&E in the near future.

Detailed comments relating to biodiversity matters are provided in Attachment A. OEH's review of the RTS with regard to Aboriginal Cultural Heritage is provided in Attachment B.

If you have any questions regarding this matter please contact Terry Mazzer on 6883 5302 or email terry.mazzer@environment.nsw.gov.au.

Yours sincerely

**DEBBIE LOVE**
**Acting Regional Manager, North West**
**Regional Operations**

Attachment A: OEH Review – Response to Submissions, Biodiversity Assessment Report and Biodiversity Offset Strategy

Attachment B: OEH Review – Response to Submissions – Aboriginal Cultural Heritage

**ATTACHMENT A**

# OEH Review – Response to Submissions, Biodiversity Assessment Report and Biodiversity Offset Strategy

Acronyms

| | |
|---|---|
| BAR | Biodiversity Assessment Report |
| BMP | Biodiversity Management Plan |
| BOS | Biodiversity Offsets Strategy |
| DP&E | Department of Planning and Environment |
| EIS | Environmental Impact Statement |
| EP&A Act | *Environmental Planning and Assessment Act 1979* |
| EPBC Act | Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* |
| FBA | Framework for Biodiversity Assessment |
| KEPCO | Korea Electric Power Corporation |
| OA5 | Offset Area 5 |
| OEH | Office of Environment and Heritage |
| RTS | Response to Submissions |
| TSC Act | *Threatened Species Conservation Act 1995* |

## 1. Introduction

OEH understands that the project is being assessed as a transitional project under the *NSW Biodiversity Offsets Policy for Major Projects,* and that the Proponent has committed to undertake a full biodiversity assessment using the Framework for Biodiversity Assessment (FBA).

As agreed, the Proponent has supplied the following additional biodiversity information with the Response to Submissions (RTS):

- Biodiversity Assessment Report (BAR) following stages 1 and 2 of the FBA, and;
- Biodiversity Offset Strategy (BOS) using indicative data which does not currently meet the requirements of stage 3 of the FBA.

OEH considers that the additional information supplied with the RTS is sufficient to undertake an assessment at this stage of the process, but considers that the BOS will require further data to satisfy the requirements of the FBA at offset sites. The following comments have been made in this context.

## 2. Offset Area 5

OEH has previously expressed concern regarding the appropriateness of Offset Areas 5 (OA5) as an offset property as the area will be subject to damage from surface cracking and subsidence caused by longwall mining directly under approximately 70 per cent of the proposed offset area. However, for the purposes of this RTS review, OEH is prepared to accept OA5 as part of the indicative BOS presented.

It is OEH's understanding that KEPCO is considering securing the offset sites through BioBanking Agreements but that the final mechanism will depend on negotiations with OEH and DP&E. BioBanking Agreements are OEH's preferred option for Offset Areas 1 to 4 and for the Yarran View offset site.

However, as noted in previous correspondence, including OEH's response to the EIS on 6 November 2015, Section 11(1) of the *Threatened Species Conservation (Biodiversity Banking) Regulation 2008* (BioBanking Regulation) indicates that the land in OA5 is not suitable to be designated as a BioBank site as the area will be subject to future impact from underground mining. Therefore, the offsetting

value of OA5 should be assessed after mining-related impacts have ceased, then secured through BioBanking if it delivers the credits required for this offset area. Prior to the cessation of mining impacts on OA5, the *NSW Biodiversity Offsets Policy for Major Projects* (Offsets Policy) indicates that a voluntary planning agreement under s93F of the EP&A Act may be a suitable mechanism to secure the offset. Alternatively a Trust Agreement under the *Nature Conservation Trust Act 2001* may be a suitable mechanism. Further discussion on this matter between KEPCO, DP&E and OEH will be required.

Recommendations

2.1. DP&E accept OA5 as an offset option, secured under the Offsets Policy, subject to final FBA assessment after mining impacts have ceased. If mining impacts are greater than predicted, additional offsetting may be required.

2.2. KEPCO and DP&E continue to liaise with OEH to resolve a completed BOS including full data as required by the FBA for offset sites.

2.3. DP&E ensure that offset areas are secured under the provisions of the Offsets Policy.

## 3. Matters for Further Consideration

In a letter dated 2 March 2015, OEH supplied KEPCO with a list of species, populations and ecological communities which required further consideration if impacted by the Bylong Coal Project. The BAR has correctly identified encroachment on the riparian buffer along the Bylong River, Box Gum Woodland and derived native grassland, and the Regent Honeyeater as matters requiring further consideration by the consent authority under the FBA. Further information regarding these matters has been supplied in the BAR. One further species, the Brush-tailed Rock Wallaby, has been identified as having habitat present and was addressed as a species requiring an offset rather than as a matter for further consideration.

No additional offsets, supplementary measures or other actions have yet been proposed within the BOS with respect to impacts on matters for further consideration.

Recommendation

3.1. DP&E note that there are matters which will require further consideration by the consent authority as required under the FBA.

## 4. Variation to Offset Rules – Ecosystem Credits

As detailed in the BOS (section 3.5.1) there is a shortfall of ecosystem credits (143 of 152 required) for one vegetation community, HU547 (Fuzzy Box Woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion). The BOS proposes using another vegetation type, HU690 Grey Box - White Box grassy open woodland on basalt hills in the Merriwa region, upper Hunter Valley which has approximately 6,000 surplus credits available. The FBA does not allow this substitution to occur under the variation rules, as HU547 is more highly cleared than HU690 (95 per cent cleared versus 90 per cent). OEH is willing to work with the Proponent to resolve this matter.

Recommendation

4.1. KEPCO and OEH further examine options for addressing the shortfall of ecosystem credits for the Fuzzy Box Woodland vegetation community.

## 5. Variation to Offset Rules – Species Credits

As detailed in the BOS section 3.5.2 there is a shortfall of species credits (81 of 13,174 required) for the Regent Honeyeater. Options for variation of offset rules under the FBA are constrained because the species is listed as critically endangered under both the EPBC Act and the TSC Act, and was identified as a “matter for further consideration” in the BAR following advice from OEH. OEH is willing to work with the Proponent to resolve this matter. As part of the assessment OEH may need to inspect habitat on the offset sites to confirm suitability for the Regent Honeyeater.

Recommendation

5.1. KEPCO and OEH further examine options for addressing the shortfall of species credits for the Regent Honeyeater.

## 6. Cliffs

In the response to the EIS OEH recommended that Longwall 106 be shortened so that cliff C5 is not impacted by subsidence. Information supplied by KEPCO in the RTS confirms that the prominent cliffs (C5, C6, C8 and C9) will experience significant subsidence movement and likely cliff falls. In the RTS, KEPCO proposes to monitor subsidence information for the initial five longwalls and may modify the mine plan if the monitoring indicates that cliff C5 could be adversely impacted. KEPCO should be required to avoid impacts on cliff C5.

OEH also recommended insectivorous bat monitoring at prominent cliffs within and adjacent to the subsidence area to establish a baseline level of activity and search for potential roost sites. The RTS proposes to include monitoring within the Biodiversity Management Plan (BMP). The EIS could not conclusively exclude the potential for breeding and/or roosting of these species in the cliff lines of the proposed subsidence area, and assumes their potential presence by including the known species in the BOS. The EIS states that additional impacts are likely to occur as a result of subsidence which may injure roosting bats, modify cave structures and impact on maternity roosting habitat, if present.

OEH remains concerned that subsidence may significantly affect the four prominent cliffs mentioned above, and some of the less prominent cliffs as shown in the RTS. Additionally some of these cliffs may harbour roosting sites for the threatened bats species discussed in the BAR. OEH recommended avoidance of cliff C5 as it is the longest and highest of those likely to be significantly impacted by subsidence and its position at the end of the longwall would minimise changes to the mine plan. Given that underground operations do not commence until year 7, and mining under the prominent cliffs will not occur until approximately year 14 there is sufficient time to undertake subsidence assessment and bat monitoring to address this issue. The onus should be on KEPCO to demonstrate that the cliffs likely to experience rock falls will not suffer significant damage and do not contain roost sites for threatened bats.

Recommendations

6.1. KEPCO is required to avoid impacts caused by subsidence on cliff C5.

6.2. A bat survey and monitoring program is included within the BMP to search for potential roost sites at prominent cliffs within and adjacent to the subsidence area and to establish a baseline for bat activity.

**ATTACHMENT B**

# OEH Review – Response to Submissions – Aboriginal Cultural Heritage

The OEH submission to DP&E raised 9 issues about the Bylong Coal ACH study (6 November 2015) and these issues were reiterated with DP&E and KEPCO at a follow up meeting (3 February 2016). OEH is satisfied with the responses by KEPCO for most of the issues previously raised. Two key issues remain.

1. The response to the issues raised about the ochre site OQ001 is incomplete, and all of the rock art specialist's recommendations (Gunn 2016) should be acted on.

2. OEH do not accept the response by KEPCO that accumulative harm to Aboriginal heritage will be minimal from the proposed mine development.

OEH do accept the proposed KEPCO mitigation strategies overall which, are yet to be finalised through the development of the Heritage Management Plan to be inclusive of input from the Registered Aboriginal Parties (RAPs).

## KEY POINTS

### Aboriginal ochre site OQ001

OEH acknowledges that a rock art specialist has re-examined site OQ001 to guide management decisions for the site (Gunn 2016).

In considering the KEPCO response OEH has also reviewed and considered the findings of Gunn (2016). Key findings of the OEH examination are as follow:

- There is no physical evidence to support the earlier claim by RPS (2015) that it is an archaeological site.
- The claim by RPS, based on advice from a member of the Registered Aboriginal Party, that the site is of gender importance lacks documentation and therefore requires supporting documentation to understand the site's contemporary claim of significance.

OEH review of the Gunn (2016) assessment recognises additional findings which are not in the KEPCO response:

- The exposed seam at OQ001 consists of good quality red and yellow mineral substances suitable for the preparation of ochre.
- Gunn (2016) hypothesises that the exposed seam is potentially extensive across the region and that a chemical analysis would be necessary to determine if this was the case.

In addition to the study by Gunn (2016), OEH has undertaken an examination of records of known art sites for the region from the Aboriginal Heritage Information Management System (AHIMS). Those records show that Aboriginal choice of ochre for rock art work is red despite reports of natural outcrops of yellow and white mineral deposits. This phenomena has not been previously realised and reasons for ochre preference may be either cultural or environmental. The Gunn (2016) recommendation for chemical analysis has considerable merit and should therefore be considered.

OEH has also discovered through examining the AHIMS database that the region's rock art sites comprise mostly of hand stencils (c.95 per cent) with few examples of other subjects for example, animals and tracks. The frequency of hand stencils per rock shelter is relatively low on average but are numerously placed across the region based on studies of nearby coal mine assessments including the Bylong assessment. The key findings by Gunn (2016), in addition to art site patterns identified on AHIMS, warrants further investigation to understand the dominance of red ochre and hand stencilled art across the region.

OEH agree with the general statement by Gunn (2016) about the high cultural significance of ochre quarries and/or sources to Aboriginal people as reported by various researchers across the continent (Gunn 2016:3). OEH support the Gunn (2016) recommendation that adequate documentation about the cultural importance of the site is presented.

OEH acknowledge that KEPCO will address the findings of the specialist study with the Registered Aboriginal Parties during consultation with the RAPs.

**Archaeological context and accumulative harm to Aboriginal sites.**

KEPCO maintain that harm to ACH sites within the Bylong Coal easement overall will be minimal. KEPCO has also provided an archaeological summary of the several hundred Aboriginal sites discovered during the previous Ulan, Wilpinjong and Moolarben mine investigations. The vast majority of those objects have since been removed through various mitigation activities. Collectively, the sites affected by the proposed Bylong Coal project will increase harm to ACH regionally.

The environmental impact assessment should draw on the results of studies from the vicinity because they are in many instances the only source of detailed information that can provide the context and baseline of what is known about Aboriginal cultural heritage. This point is stated in the OEH *Guide to Investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (OEH 2011:6).

**Archaeological significance assessment (scientific)**

OEH remain uncertain about the assessment of scientific significance of artefact scatters within the proposed project footprint. KEPCO have responded to this issue by stating that:

*Due to the smaller size of artefact scatters at the {Bylong} Project compared with the former Mt Penny Project, detailed site content analysis was not deemed warranted.*

OEH therefore cannot advise DP&E on the documented significance of the artefact assemblages discovered within the Bylong mine easement (RPS 2015) and will await the results of the mitigation and excavations proposed by KEPCO during the Heritage Management Plan process. OEH do accept the KEPCO response to the previous OEH recommendation to re-evaluate the proposed RPS excavation program which will now have greater focus at suitable localities along the Bylong valley floor.

OEH accept the response from KEPCO on issues raised by OEH of Aboriginal cultural significance but emphasise that further work will be needed in assessing and documenting cultural significance during the Heritage Management Plan process as also recommended by Gunn (2016).

OEH remains concerned about the threshold of harm that is now encroaching on ACH generally from expanding mine interest in the region. Notwithstanding the mitigation actions of previous mine projects and those of the proposed Bylong Coal project, OEH is concerned that harm to ACH is approaching unacceptable thresholds for the region unless adequately balanced with a measured conservation gain. An imbalance of this scale may have permanent intergenerational consequences.

<u>Recommendations</u>

1 ACH assessments of select biodiversity offset areas for the Bylong Coal project.

2 A regional rock art study that includes all recommendations of the Gunn assessment report (Gunn 2016) and that provides opportunities for Aboriginal people to develop informed views on contemporary cultural significance.

Your reference :
Our reference : EF15/16176; DOC16/193448-01
Contact : Ms Sheridan Ledger; (02) 6332 7608

Mr Matthew Riley
Senior Planning Officer
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

9 May 2016

Dear Mr Riley

**PROPOSED BYLONG COAL PROJECT – RESPONSE TO SUBMISSIONS REPORT**

**EPA COMMENT**

I refer to your email of 1 April 2016 requesting the Environment Protection Authority (EPA) provide comment regarding the Response to Submissions Report (the RTS) for the proposed Bylong Coal Project (the Project).

As requested, the EPA has considered the RTS for the Project in relation to the environmental issues for which the EPA has the primary legislative responsibility, being air and noise quality impacts, including blast overpressure and vibration, surface water and waste management.

Please find in Attachment 1 the EPA's comments regarding the RTS, which includes general comments on the adequacy of the impact assessment, including the additional informational provided in the RTS, recommendations regarding the provision of further additional information and where practicable, recommended conditions of consent, if approval is recommended by the Department of Planning & Environment (DPE).

The EPA requests the opportunity to review the draft Director-General's Environmental Assessment report for the Project and to comment on any conditions of consent, should approval be recommended by the DPE.

Should you have any further enquiries in relation to this matter please contact Ms Sheridan Ledger at the Central West (Bathurst) Office of the EPA by telephoning (02) 6332 7608.

Yours sincerely

**DARRYL CLIFT**
**Head Central West Unit**
**Environment Protection Authority**

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## ATTACHMENT 1 – EPA COMMENT BYLONG COAL PROJECT RESPONSE TO SUBMISSIONS REPORT (RTS)

### Air Quality

Separate estimation of diesel PM and assessment of impacts

The RTS has estimated a nominal change in $PM_{10}$ emissions from haul trucks by removing the assumed 85% suppression from diesel $PM_{10}$. The RTS advises that removing the 85% suppression increases $PM_{10}$ by less than 3% and concludes that there would be no change to assessment results.

Notwithstanding any methodological assumptions made in the proponent's estimation of diesel $PM_{10}$ from haulage, the EPA advises that two critical issues have been overlooked in the RTS emission estimation.

1. The RTS emission comparison is presented for $PM_{10}$ emissions. However, in reality the mean mass particle size for diesel PM is closer to $PM_1$. Therefore, comparison and evaluation of potential impacts would be better suited to consideration of $PM_{2.5}$ emissions.

   The exhibited air quality assessment estimates total $PM_{2.5}$ emissions (year 3) at approximately 13% of estimated $PM_{10}$ emission. On this basis, where analysis is presented as a function of proportional emission change, the proportional change for $PM_{2.5}$ emissions is likely to be much larger than the estimated change in $PM_{10}$ emissions presented in the RTS.
2. The RTS only considers diesel $PM_{10}$ emissions from haul trucks. This evaluation neglects to consider other significant diesel fuel burning equipment commonly used at mine sites such as excavators and dozers. EPA analysis of the NSW mining sector shows that haul trucks account for the largest consumption of diesel at mine sites (~60%) followed by excavators, dozers and loaders (~35% combined). Therefore, failure to account for diesel equipment other than haul trucks could alter the conclusions of the analysis presented in the RTS.

Approaches to minimising diesel PM emissions

The proponent has advised that they are cognisant of legislative requirements and that equipment will be maintained in a proper and efficient condition.

The RTS does not evaluate or nominate reasonable and feasible controls for diesel PM. The EPA reiterates requirements to minimise particle emissions via the use of best practice measures. The EPA's analysis, *NSW Coal Mining Benchmarking Study Best-practice measures for reducing non-road diesel exhaust emissions* (EPA, 2015) indicates that there are reasonable and feasible control measures available to reduce diesel PM emission which the proponent has failed to consider.

Summary

1. The RTS does not adequately assess diesel particulate matter (PM) emissions.
2. The RTS does not evaluate or nominate reasonable and feasible controls for diesel PM.

### Noise

The EPA does not support the proponent's proposal to use the Broner low frequency noise (LFN) method in lieu of the low frequency modification factor in the NSW Industrial Noise Policy (INP). The EPA notes that the application of the NSW INP is required under the Secretary's Environmental Assessment Requirements (SEARs) for the Project.

The EPA considers that a LFN criteria based solely on an overall C-weighted noise level is not suitable for application across industry types without first considering the frequency content of the noise source and

justifying its appropriateness to gauge impact. Whilst the EPA notes that the proponent has made an assessment against some of the LFN criteria in the draft Industrial Noise Guideline, this document does not represent current Government policy. The proponent has not sufficiently supported an alternative approach and accordingly the EPA recommends that the NSW INP should be applied.

The EPA's previously recommended conditions of approval are based on the application of the NSW INP LFN modifying factors.

## Surface Water

### Site Water Balance

The EPA notes the RTS and EIS generally commits the Project to being "nil discharge" from mine water storages during the mining, with discharges from sediment dams occurring during wet weather events. As such, should approval for the Project be granted by the DPE, the EPA will not licence any discharges from mine water storage dam/s which may occur during the period of mining. The proponent will therefore be required to ensure it can comply with the requirements of the *Protection of the Environment Operations Act 1997* (the POEO Act) should any releases from mine water storages occur.

The RTS and EIS site water balances' indicate that water remaining in the final open cut void/s upon completion of mining will be pumped to the underground mine workings. Given potential uncertainties in water quality and quantity in the final void/s at the completion of mining (a period of some 20 years), the EPA considers that a decision regarding appropriate management measures for such water should be assessed and determined during mine closure planning. The pumping of water from the final void to the underground workings may require licensing by the EPA.

### Sediment Basins

The EPA notes that sediment dams are proposed to be sized as "Type F" sediment basins with a settling zone volume based on the 90$^{th}$ percentile 5-day duration rainfall at Scone which the RTS provides is consistent with recently approved Maules Creek Coal Mine and the Watermark Coal Project. While this may be the case, coal mines and quarries throughout central west NSW are generally licensed to have sediment basins with a settling zone volume based on the 95$^{th}$ percentile 5-day duration rainfall, for example, the recently approved Moolarben Coal Mine Stage 2. The EPA considers this conservative approach assists with ensuring compliance with the conditions of the EPL which relate to the management of the basins.

In regards to discharges from sediment basins, water quality discharge limits and conditions relating to monitoring and the management of sediment dams would be included in an environment protection licence, should the Project be approved by DPE.

### Clean Water Diversions

It is noted that a key objective of the water management system will be to maximise the diversion of clean water flows around the mining operations. From a site inspection of the Project area previously undertaken by the EPA, the extent of the slope the hill to the northeast of the CHPP was noted. All figures in the EIS which illustrate the CHPP and underground MIA do not include an indication of any proposed clean water diversions for these areas of the Project. The EPA notes the commitment made in the RTS to the installation of a clean water diversion drain around the rail loop, CHPP and the underground MIA.

Wastewater

Section 3.7.6 of the EIS provides that the design capacities of the three sewage treatment facilities are 33, 33 and 60 kl/day which are located at the open cut and underground MIA's and at the WAF. This information is confirmed in the RTS.

The EPA notes from the RTS that uncertainty remains as to how wastewater from the underground and open cut MIAs will be managed. The options considered are offsite disposal, onsite irrigation and reuse. Given the space constraints of the underground MIA and the proximity of the open cut MIA to surface waters, the EPA considers that offsite disposal should be further investigated. In relation to the WAF, effluent management should be designed and managed in accordance with the *Environmental Guideline for the Use of Effluent by Irrigation* (DEC 2003).

NSW GOVERNMENT | Department of Industry

BN16/3084

Mr Matthew Riley
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Resource Assessments
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SYDNEY NSW 2001

Email: matthew.riley@planning.nsw.gov.au

Dear Mr Riley

**Bylong Coal Project – (SSD 6367) Response to Submissions Comments**

I refer to your email of 1 April 2016 requesting comments from the Division of Resources & Energy (Division) to the Response to Submissions (RTS) report from Kepco Bylong Australia (the Proponent) in support of an application for development consent for the Bylong Coal Project.

The Division has reviewed the *Bylong Coal Project, Environmental Impact Statement Response to Submissions, September 2015.*

The Proponent has made an unequivocal commitment to remove the rail loop and all related infrastructure upon project decommissioning. The RTS report also commits to re-contouring the affected land to a safe and stable condition (but not to original contours) and re-establishing vegetation consistent with the broader rehabilitation strategy described in the EIS.

The Division is satisfied that the Proponent has addressed all of the comments made.

Mining Lease Applications were lodged with the Division in July 2015. These applications included the appropriate supporting information as noted in the Division's submission.

Should you have any enquires regarding this matter please contact Steve Cozens, Senior Project Officer, Royalty and Advisory Services on telephone (02) 9842 8573.

Yours sincerely

K Hargreaves

**Kylie Hargreaves**
**Deputy Secretary**
**Resources & Energy**

28 APR 2016

Transport
Roads & Maritime
Services

27 April 2016

SF2014/008950; WST14/00011/04

The Manager
Mining Projects
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

**Attention: Stephen O'Donoghue**

Dear Mr O'Donoghue

**SSD14_6367: Response to Submissions (RtS); Bylong Coal Project; Bylong**

I refer to an email from Matthew Riley from the Department of Planning and Environment (DPE) referring RtS for SSD14_6367 to Roads and Maritime Services for comment. Reference is made to Roads and Maritime's previous submission in relation to this development proposal dated 6 November 2015.

Roads and Maritime remains concerned with the proposed development, particularly in relation to mine commuter road safety. The applicant has provided good information that identifies existing risks on the surrounding road network. This includes Table 3.2 of the revised *Traffic and Transport Impact Assessment* that reports existing higher than average crashes on Bylong Valley Way (MR215) and Wollar Road (208). The revised report also highlights known risks associated with mine staff commuting between residences and mine sites both daily and between shift periods.

The report does not however provide measurable commitments by the applicant or planned works to address these risks. For example:

- The revised document does not include a road safety audit of the road transport routes required by the proposed mine. The applicant advises that works are either planned or currently underway on Bylong Valley Way and Wollar Road, however, no details are provided of where exactly all these works are and, whether the works planned/underway will provide a higher level of safety over the full extent of the roads or only in part.

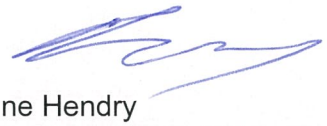
- Limited details have been provided on measures and programs to be employed by the applicant to enforce, or at least encourage, mine staff to travel to and from work safely and/or reduce the exposure of mine staff to risks by minimising travel or providing safe travel options.

The proposed mine is located in an isolated area and is likely to employ staff who live in centres at least one hour travel distance from the mine site. Traffic generated by the mine will significantly increase traffic volumes and change times of travel on public roads that already have a poor crash history. Given the isolated location, travel distances, long work hours in the mining industry, existing road environment and crash history, Roads and Maritime strongly recommends that SSD14_6367 not be approved until the applicant provides additional information to address these concerns.

To assist the applicant in providing the additional information, I suggest that the applicant meet with Roads and Maritime's Land Use and Roads User Safety units. The Road User Safety Unit has experience in and provides assistance to mines throughout the Western Region to develop incentives and initiatives aimed at preventing mine commuter crashes.

Please confirm with Roads and Maritime that the development application will not be determined until such time as Roads and Maritime has had an opportunity to comprehensively assess the development application following provision of the additional information. To arrange a meeting or to discuss this matter further, please contact Andrew McIntyre, Manager Land Use Assessment, on 02 6861 1453.

Yours faithfully



Dane Hendry
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File: SF/FA385231
Job ID: DOC16/213055
Your Ref: SSD6367

Stephen O'Donoghue
A/ Director Resource Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Mr O'Donoghue

**RE: Heritage Division comments on Response to Submissions for Bylong Coal Project (SSD 6367).**

I refer to your email dated 2 May 2016 inviting comments for the above described State Significant Development application.

The Heritage Division of the Office of Environment and Heritage (OEH), as delegate of the Heritage Council of NSW, has reviewed the documentation and provides the following comments:

Built Heritage

The Heritage Division notes that there is no statutory requirement for the proponent to seek inclusion of the identified heritage items in the Heritage Schedule of the *Mid-Western Regional Local Environmental Plan 2012* (LEP). However, considering the extent of proposed demolition and adverse impacts to Bylong's historic landscape, further consultation with Mid-Western Regional Council is strongly recommend to ensure that the heritage values of the surviving heritage sites are protected.

The Response to Submissions notes that Conservation Management Plans (CMPs) will be prepared for key properties owned by the proponent, including maintenance schedules, however the sites have not been identified. It is strongly recommended that CMPs are prepared for **all** of the heritage sites that are likely be impacted by the project (except those that will no longer exist following demolition).

It is understood that an Interpretation Plan for the broader Bylong Precinct will be prepared as part of the Historic Heritage Management Plan (HHMP), following approval of the SSD. We recommend that the requirement for an Interpretation Plan is included in the consent conditions. The Plan should be referred to the Mid-Western Regional Council for comment and implemented as part of the project.

Historical Archaeological Sites and Impacts:

The response to submissions notes that the management of the Renfrew Park Remains 1 and 2 will be included in the Historic Heritage Management Plan (HHMP) for the project. It is recommended that further investigation of the Renfrew Park Remains 1 and 2 is included in the consent conditions and that any investigation occurs prior to the commencement of the project.

A program of archaeological excavation and recording prior to impact has been proposed for the Cheese Factory and potentially the Renfrew Park Remains 1 and 2. It is recommended that the conditions of consent include a condition stating that all archaeological excavations are conducted in accordance with a research design and method in accordance with Heritage Council's best practice publications including 'Assessing Historical Archaeological Sites and Relics' and 'Archaeological Assessments', and submitted to the Heritage Council or its delegate for review and that all excavations are completed by an Excavation Director suitably qualified according to the Heritage Council Criteria for the Assessment of Excavation Directors.

It is also noted that the final location of the Our Lady of the Sacred Heart Catholic Church and the location of reburial of known and potential burials have not been confirmed. It is recommended that the confirmation of these details should be a condition of consent.

If you have any questions regarding the above advice, please contact Nina Pollock, Heritage Assets Officer, Heritage Division, Office of Environment and Heritage, via email at nina.pollock@environment.nsw.gov.au or 9873 8520.

Yours sincerely

**Rajeev Maini**
Acting Manager, Conservation
Heritage Division
Office of Environment & Heritage
**As Delegate of the NSW Heritage Council**
9 May 2016

NSW GOVERNMENT | Department of Primary Industries

OUT16/16978

Mr Stephen O'Donoghue
Resource Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

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Dear Mr O'Donoghue

**Bylong Coal Project (*SSD 6367*)**
**Comment on the Response to Submissions Report**

I refer to your email dated 1 April 2016 to the Department of Primary Industries in requesting comment on the above matter. Comment has been sought from DPI Water, Fisheries, and Agriculture. DPI Fisheries have no issues. DPI Water and DPI Agriculture comments are as follows. Any further referrals to DPI can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

Overall, while the proponent's Response to Submission (RTS) has improved the understanding of the project, there remain issues which require further attention prior to determination.

In particular, the modelling and assessment of groundwater impacts should be improved to better understand the impacts and proposed management of the project.

In addition, further information is requested to allow for proper assessment of the impacts to, and proposed rehabilitation of, strategic agricultural land.

It is recommended that the proponent meet with DPI in relation to groundwater and strategic agricultural land prior to finalising the project assessment.

Comment by DPI Water
DPI Water has reviewed the Response to Submissions report (RTS) for the proposed Bylong Coal Project. The RTS has improved understanding of most of the key issues identified in the Environmental Impact Statement for the Bylong mine and has assisted in DPI Water's understanding of the project impacts.

Certain key issues remain inadequately addressed and further information is required to ensure appropriate management of the impacts of the proposal on water resources and water-dependent assets.

Detailed comments and recommendations are provided at **Attachment A** for consideration in the final assessment of the proposal, with recommended conditions of approval at **Attachment B**.

For further information please contact Hemantha Desilva, Senior Water Regulation Officer, (02) 4904 2525, hemantha.desilva @dpi.nsw.gov.au.

Comment by DPI Agriculture

The main issues and recommendations still outstanding in the Response to Submissions (RtS) on the EIS include:

- BSAL Identification – further studies have identified additional BSAL. Figures (maps) provided do not show adequately where the BSAL is located within the Project Boundary or the areas that will remain agriculturally productive during the Project's life.

- BSAL Impacts – the project will impact 594.82 ha of land identified as BSAL from both the open cut and underground mining operations. The total direct and permanent loss of BSAL has changed to 319.52 ha after further soil investigations, but the previous commitment to reinstate 227 ha has not changed and no commitment to any revision has been made.

- Contiguous BSAL - Some of the extra BSAL identified will be in areas where it is not clear whether it will be available for agriculture in the short or longer term. The RtS states it has applied buffers to neighbouring BSAL. No detail supplied on where these are and the size or adequacy of the buffers.

- Biodiversity Offsets Impacts – 282 ha of 'cultivated' or 'cleared' BSAL in the Biodiversity Offset Area (BOA) will be excised for agricultural use. It is unclear if this land is accessible for agriculture production within the BOA. Additionally, some of the lightly timbered/vegetated BSAL in the BOA can be used for high quality grazing. DPI Agriculture recommends that consideration be given to excising the BSAL within the BOA used for this agricultural production, including the necessary additional shelter zones of more heavily timbered areas for animal welfare.

- Soil Volume requirements for the project have not been provided. This is essential to determine if adequate volumes are available for rehabilitation as there is typically a 10% soil handling loss and increased surface area of the landforms to rehabilitate due to the overburden swell factor.

- It is unclear where the post mining landuses will be based in the design of the proposed final landform. This needs to be better identified in the final land use map.

- Consideration of screening should also be taken into account where there are areas of high visual sensitivity for other land users.

- Road maintenance especially in relation to increased traffic on Bylong Valley Way and the impact on agricultural and equine industry users is still outstanding even with consultation with Muswellbrook Shire Council.

- DPI Agriculture requests a meeting with KEPCO and their associated representatives for the EIS to clarify the issues outstanding and provide a more efficient review of the Project.

Detailed comments and recommendations are provided at **Attachment C**.

For further information please contact Mary Kovac, Resource Management Officer, (02) 6881 1250, mary.kovac@dpi.nsw.gov.au.

Yours sincerely

Mitchell Isaacs
**Director, Planning Policy & Assessment Advice**
12/5/2016

**Attachment A**

***Bylong Coal Project (SSD 6397)***
## Comment on the Response to Submissions Report
**Detailed comments – DPI Water**

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DPI Water has reviewed the information provided by the proponent and considers the entire body of work presents an adequate understanding of the project, along with the hydrology and hydrogeology. The associated impacts on water dependent assets were previously assessed against the minimal impact considerations of the Aquifer Interference Policy. No registered water users were indicated to fall within a Category 2 minimal impact consideration (less productive) and the independent groundwater modelling reviewer has assessed the model and concluded the model to be fit for purpose according to the framework of the Australian Groundwater Modelling Guidelines.

Notwithstanding, several issues that DPI Water noted previously remain and require further clarification or work – these are described hereunder. The issues are reproduced from DPI Water's comments regarding the Environmental Impact Statement. Additional issues raised by DPI Water hydrogeologists as part of this review of the latest reports and data are also included and the latest DPI Water response to the RTS is provided.

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## ISSUE A

- The proponent should provide a more comprehensive assessment of the potential impacts that may result from the reduction in availability of groundwater to agriculture during dry years.

- DPI Water advises that the water security to the project during extended drought periods remains uncertain and this warrants further consideration by the proponent.

**DPI Water Response to RTS:**

Further information required.

The Proponent has performed additional modelling including a new sensitivity analysis and has agreed that the potential to reduce the availability of groundwater to agriculture during dry years is likely. The analysis in Figure 41 showed that the impacts on other landholders' bores can exceed 2 m drawdown and on the Tinka Tong property can attain between 2m and 10 m drawdown. The model is sensitive to a number of parameters and there remains uncertainty as to the validity of its outputs and the degree of fitness for purpose.

In relation to other water users DPI Water asserts the model cannot be relied upon to make satisfactory predictions about reliability of supply to other users and therefore the proponent should commit to proposed make good measures for affected properties at the onset of mining. The reasons for uncertainty about modelling outputs are further discussed in relation to Issue G, below.

The proponent has provided the following response in relation to project water supply which is considered satisfactory:

*Ultimately if the borefield cannot sustainably supply the required make up water during drought then KEPCO will implement measures described within the Water Management Plan. This may include purchasing additional entitlements on the water market if available, the redundancy of KEPCO agriculture activities that extract water from bores to progressive reduction in the mining activities that consume water.* (p 80, Response to Submissions on Groundwater, AGE)

## ISSUE B

- Drawdown impacts from the mine related impacts onto nearest users cannot be reliably predicted. This issue is compounded in that the details of the proposed borefield location have not been presented and it is unclear how this extraction is considered within the groundwater model. Further, the alluvial aquifer is of limited thickness and any additional decline in water levels, particularly during a drought would impact significantly on adjoining groundwater users. Any additional water table decline as a consequence of the mine, particularly during a drought, could make many wells non-viable.

To address this concern, prior to commencement of mining "make good provisions" should be determined for all impacted users within the alluvial area of the project boundary.

**DPI Water Response to RTS:**

Further information required

This issue is also related to Issue A and the relevance was discussed above.

With regards to the additional borefield location the Proponent has provided the following response:

*Whilst stakeholders requested locations for any additional bores required to maintain yields from the alluvial borefield during drought, at this stage it is not appropriate to provide locations of additional bores. The locations of additional bores will depend on the results of test pumping commencing in mid-March 2016, as well as climatic conditions at the time of mining. KEPCO owns a large landholding within and adjacent to the Project Boundary and this area remains a potential location for additional water supply bores if expanding the Projects borefield is necessary to maintain make up water volumes during drought.* (p 80, Response to Submissions on Groundwater, AGE)

As discussed with respect to Issue A DPI Water maintains concerns regarding the reliability of supply to other users and therefore recommends the proponent commit to proposed make good measures for affected properties at the onset of mining.

## ISSUE C

- There is potential for salinity change and contamination transport from overburden emplacement areas. Whilst the geochemistry has been thoroughly addressed, the supporting documentation to mark the boundary between colluvium and alluvium is minimal. This is because the soil mapping is produced at a broad scale and will have inaccuracies. The consequence being that there is potential for mining and mine spoil emplacement to be located within alluvial boundary where such inaccuracies exist.

  To address this concern further supporting documentation is required delineating at a local scale the alluvial/colluvial boundary from which the 150m setback will apply. This should therefore be verified by field work using the proponents mine plans to ensure the alluvium setbacks are maintained in the field.

**DPI Water Response to RTS:**

Response satisfactory.

The proponent has detailed further work by Douglas Partners and has provided updated maps with appropriate setbacks of mining areas.

The Proponent has also responded with the following with regards to salinity contamination:

*It is agreed with the comment in the submission that a contaminant transport model can better represent the formation of any plumes emanating from the buried rejects materials, however it is considered that contaminant transport modelling is not warranted at this stage of the Project. This is because the EIS which used conservative assumptions on salinity released from the rejects materials indicated a low risk to water quality. As the risk was identified to be low, more sophisticated methods were not considered to be warranted at this stage. Section 7.2.8 discusses measures to be documented within the Water Management Plan for ongoing monitoring of waters that come in contact with the rejects materials and a post closure monitoring program.* (p 84, Response to Submissions on Groundwater, AGE)

The proponent must implement agreed setback distances from the alluvial boundary and perform ongoing monitoring of the setback during project construction to ensure the setback is maintained. The proponent should arrange the supplementation of the groundwater modelling by including a contaminant transport model as part of a model refinement and enhancement program undertaken as part of the Water Management Plan for the operation.

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## ISSUE D

- Water supply reliability of the proposed borefield including planned expansions during extended drought periods is unknown and insufficient detail about the borefield was provided for review. Section 13.6 from the EIS summarises the precarious capacity of the alluvial aquifer to meet mine water demands.

  *During the dry season, it is likely that many of the irrigation wells are unable to sustain high abstraction volumes, and the groundwater modelling confirms this.*

  The security of the mine's water supply warrants detailed consideration and reporting.

**DPI Water Response to RTS:**

See response at Issue A and Issue G.

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## ISSUE E

Conceptual hydrogeology could not be adequately assessed due to the proponent not providing bore logs and groundwater contour maps for each aquifer.

**DPI Water Response to RTS:**

Further information required.

DPI Water had difficulty interpreting the borelogs provided by the proponent due to the resolution of the documentation. Certain maps were also of poor resolution and could not be adequately assessed. DPI Water did not have sufficient time to conduct a detailed review of the borelogs to understand pertinent detailed aspects of the hydrogeology. Updated maps, shapefiles and borelogs with higher resolution were requested for use during the Water Management Planning stage, but were not made available to DPI Water staff assessing the RTS.

The proponent did provide very useful groundwater contour maps for each aquifer which yielded greater understanding however there were in certain cases questions on the interpretation of the data used to derive the contours and the conclusions drawn in the groundwater assessment.

DPI Water interpreted from the maps that a hydraulic connection between the Quaternary alluvial aquifer and the main Coggan Coal seam aquifer was likely to exist. The groundwater contour information also provided confirmation regarding the poor state of calibration for the deeper layers in the model that was alluded to during the preceding EIS review.

DPI Water requests the proponent facilitate a workshop discussion between the independent model reviewer, the modeller and DPI Water staff to improve the model for the Water Management Planning stage. The proponent is to provide higher resolution maps and borelog data and a 3D conceptual hydrogeological model with details including layer thicknesses and hydraulic conductivity distributions to DPI Water prior to the workshop discussion.

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## ISSUE F

- Under the Water Sharing Plan (WSP) ongoing security of access is required to the DPI Water network infrastructure which is situated within the Project area. These bores are to be used as part of the ongoing regulation of the Bylong River Water Source.

**DPI Water Response to RTS:**

Response satisfactory.

The proponent has provided the following response:

*The Water Management Plan will also provide a commitment by KEPCO to maintain access to the government monitoring bores that occur with the Project Boundary or on KEPCO owned land outside Project Boundary.* (p 87, Response to Submissions on Groundwater, AGE)

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## ISSUE G

- No groundwater level outputs from the model for layers between the alluvium and Coggan seams were provided to understand the model behaviour in these layers

- The sensitivity analysis was not thorough enough in terms of varying the ratio between horizontal to vertical hydraulic conductivity nor was justification for the magnitude of difference provided.

- The model is over predicting water levels which means there is too much water in the model that is then potentially available to attenuate the water levels in the alluvium aquifer (with low vertical K values) resulting in dampened drawdown predictions due to mining.

- The likely presence of multiple semi-confined aquifers separated by aquitards and the potential for several distinct, largely unrelated shallow water tables to be present within the modelling domain suggests that other model codes could be better suited to the site.

  It is suggested therefore that the model should be used with care when assessing drawdown effects and the propagation of the drawdown cone outwards from open cut and underground mines.

**DPI Water Response to RTS:**

Further information required.

The proponent satisfied the first point.

The proponent performed a much improved and very useful sensitivity analysis which revealed how sensitive the model was to certain parameters. However the uncertainty was never quantified by varying the sensitive parameters on the actual updated model. The model was also sensitive to recharge.

The issue of greatest concern is the mismatch between the hydraulic conductivities obtained from Packer testing and those used in the model. This was especially the case for the Ulan and Coggan coal seam layers but was not limited exclusively to just these units. The distribution of the hydraulic conductivity in the model was not provided as a figure and the range of magnitude of hydraulic conductivity values applied to the model was very wide, resulting in critical uncertainty as to locations where excessively low hydraulic conductivity may have been applied. The sub-cropping Ulan and Coggan seams (that are recognised as important aquifers) may have an unreasonably low hydraulic conductivity applied in the model in close proximity to the stream and alluvial aquifer or close to the surface beneath the weathered interburden (both are recharge areas). This could result in the inability of the model to allow realistic and representative volumes of water to enter into the deeper aquifer. Under the conditions of modelling mining induced drawdowns, the impact on the alluvial aquifer may be greatly diminished if a low hydraulic conductivity is applied to aquifers connected to the alluvium.

The conceptual hydrogeological model did not adequately consider the initial draining of the Ulan and Coggan layers by the open cut and underground mines (facilitated by down-dip flow within the seams) and then the subsequent depletion of the alluvial aquifer via leakage through hydraulic connections between the different layers.

The risk to the project and neighbouring authorised users is that the full thickness of the alluvial aquifer in the vicinity of the mine may be entirely depleted of groundwater and potentially harmed.

During discussions with the proponent, DPI Water requested that the 3D conceptual model be provided and this has not yet occurred.

On the basis of the hydrogeology and modelling work reviewed thus far, DPI Water considers that the proposal should currently be considered based on a worst case scenario that assumes that the full thickness of the alluvial aquifer in the vicinity of the mine will be drained if the proposal goes ahead, thus diminishing the water supply to the project itself and to other authorised users. To better define the conditions under which this will occur, and the spatial extent where this could occur, DPI Water considers that the proponent should be required to do further modelling with appropriate refinements.

In addition, the proponent should arrange additional aquifer pumping tests with monitoring of adequately located observation bores to thoroughly characterise all of the layers that have the potential to drain the alluvium aquifer – this includes the Ulan and Coggan Coal seams.

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## ISSUE H

- The proponent does not currently hold a licence under Part 5 of the Water Act to account for the take of water from the Permian aquifer.

**DPI Water Response to RTS:**

Response satisfactory.

The proponent has submitted an application for a licence under Part 5 of the *Water Act 1912* which is currently under assessment.

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## ISSUE I

- No remediation technique has been proposed for sections of creek that are not accessible by machinery. It is requested that additional strategies be identified to avoid, minimise and manage surface cracking in less-accessible sections of Dry Creek.

**DPI Water Response to RTS:**

Response satisfactory.

The proponent has provided the following response

*However, KEPCO will monitor cracking and surface impacts during operations to ensure the cracks do not pose an unacceptable risk to water flows, wildlife or livestock.*

*When cracks appear in areas inaccessible to machinery, any attempt to provide access for machinery to the site will likely cause more damage to the vegetation and soils than the subsidence impacts. Therefore, if deemed appropriate, the crack will be left to self-repair over time.*

*Surface cracking which has been assessed to pose unacceptable risk to the condition of Dry Creek and associated tributaries, alternate remediation measures will be considered for implementation. This may include attempts for personnel to access the impact site by foot and attempt to remediate the cracking without mobile equipment.* (p 79, Response to Submissions, Hansen Bailey)

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## ISSUE J

- A sufficient number of legible cross-sections to be provided in all orientations to adequately describe the geology.

**DPI Water Response to RTS:**

Further information required

While the proponent has provided improved cross-sections, there are not a sufficient number to understand the 3D conceptual geology along the groundwater flow paths from recharge areas towards open-cut or underground mines or beneath coal spoil emplacement areas and towards other water users. The sections across the alluvium do not depict the dipping Permian beds.

The proponent should liaise with DPI Water to obtain information about specific layer and cross-section requirements.

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## Additional recommendations not elsewhere addressed

**With regard to the AIP "minimal impact considerations", in respect of water quality issues the following is recommended.**

- To manage contamination transport from the coal spoils areas, the proponent must implement the management measures recommended by the independent geochemical assessor, RGS Environmental Pty Ltd, with additional regard to appropriate groundwater and spoil seepage monitoring.

**With regard to mine water security, it is recommended,**

- That intensive and extensive borehole water level monitoring is continually undertaken by the Proponent during mining to monitor drawdown impacts and inform the management responses adopted by the Proponent.

**Outstanding prior recommendations yet to be addressed**

- The proponent should provide a map depicting the depth of the weathered zone within the Project boundary and comment in greater detail on the water bearing capacity of this zone.

- The proponent should provide a separate groundwater contour map for the basalt aquifer beneath Dry Creek. The thickness of the saturated zone and unsaturated zones in the Basalt is also to be provided.

- The proponent should provide a water balance for each of the aquifers in the project area and quantify the volumes available for use as a water supply source to understand the availability of water during extended drought periods.

- Due to uncertainty with the current hydrogeological conceptual model, future drilling and construction of a limited and reasonable number of monitoring bores into sandstones may be required should a data gap be recognised (Farmers Creek Formation, the Gap Sandstone, Watts Sandstone or other aquifers)

- An automated Class A pan for measuring evaporation should be installed on site

**End Attachment A**

**Attachment B**

***Bylong Coal Project (SSD 6397)***
## DPI Water Recommended Conditions of Approval

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DPI Water recommends the following conditions be included in any determination issued for the Bylong Coal Project:

1. Prior to commencement of operations the proponent must prepare a Water Management Plan in consultation with DPI Water, which is to incorporate the following (not exclusive):
    - A procedure for the implementation of *make good provisions* for water supply to the Tinka Tong property in general accordance with the *NSW Aquifer Interference Policy* at the onset of mining.
    - A monitoring program to enable the continuing assessment of impacts to the reliability of groundwater supply at all potentially affected properties using appropriately located and constructed bores equipped with automatic water level loggers.
    - A procedure for the implementation of *make good provisions* for water supply to any properties identified as impacted as a result of the mining operations in general accordance with the *NSW Aquifer Interference Policy*
    - A program for the update and refinement of the groundwater model in consultation with DPI Water to enable future refinement of the Water Management Plan in accordance with the principles of adaptive management. This program should include (not exclusive):
        - a workshop discussion between the independent model reviewer, the modeller and DPI Water staff. The proponent is to provide beforehand (i.e. prior to the workshop discussion) higher resolution maps and borelog data, a 3D conceptual hydrogeological model with details including layer thicknesses and hydraulic conductivity distributions, and all of the measured data and analysis

corresponding to the pumping tests performed in March 2016, and any subsequently undertaken;

- updated model runs with alternative hydraulic conductivity values in both horizontal and vertical orientations (KH and KV), determined in consultation with DPI Water, applied to the Permian aquifers in contact with the identified recharge areas;
- additional uncertainty analysis on these model scenarios by applying the range of values obtained from hydraulic conductivity assessments across the Project area, including any additional aquifer pumping tests;
- modelling of both the open cut mine void and underground mine as scenarios that drain water from the Permian aquifers in contact with the identified recharge areas; and
- supplementation of the groundwater modelling by inclusion of a contaminant transport model to assess potential for salinity change and contaminant transport from overburden emplacement areas.

2. The proponent must implement agreed setback distances from the alluvial boundary and perform ongoing monitoring of the setback during project construction to ensure the setback is maintained.
3. All works on waterfront land are to be conducted in accordance with DPI Water's *Guidelines for Controlled Activities on Waterfront Land* as amended from time to time.

**End Attachment B**

**Attachment C**
***Bylong Coal Project (SSD 6397)***
## Comment on the Response to Submissions Report
**Detailed comments – DPI Agriculture**

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Additional soil investigations have identified more BSAL than originally described in the EIS. However the areas within the Project Disturbance Footprint (PDF) are unclear. To clarify the areas outstanding in the response to submission DPI Agriculture request the Proponent provide maps as outlined in table 1 and populate table 2 to show area details of BSAL within the Project. Table 3 outlines additional issues not addressed in the Response to Submission.

Table 1: Maps to be supplied and their required information

| **Map 1** | **Map 2** |
|---|---|
| - Project Boundary<br>- Project Disturbance Boundary<br>- Subsidence areas<br>- Offset areas<br>- Revised BSAL | - Project Boundary<br>- Project Disturbance Boundary<br>- Subsidence areas<br>- Offset areas<br>- Areas of continued agricultural production during the project<br>- Retained BSAL in Offset areas and access to these<br>- Rehabilitated BSAL |

Table 2: BSAL areas to be confirmed

| **Item** | | **Area (ha)** |
|---|---|---|
| BSAL in Project Boundary | | |
| BSAL in Project Disturbance Footprint | | |
| BSAL to be in agriculture production during life of project | | |
| BSAL Impacted | Indirect and Temporary | |
| | Direct and Temporary | |
| | Direct and Permanent | |
| | Total | |
| Biodiversity Offset Areas | Total BSAL | |
| | Loss of BSAL | |
| BSAL impacted by subsidence | | |
| Total BSAL Rehabilitated | | |

DPI Agriculture requests a meeting with KEPCO and their associated representatives for the EIS to clarify the issues outstanding and provide a more efficient review of the Project.

**Table 3: Issues in the Response to Submissions requiring further information**

| DPI Issue – response in RTS | Issue (summary) | Detail required | Response by Proponent | DPI (Agriculture) Reply |
|---|---|---|---|---|
| **4.4.2 BSAL Impacts** | | | | |
| **4.4.2.1 BSAL within Subsidence Study Area (Page 91)** | The proponent has committed to reinstating 227ha of BSAL which is 10 per cent more than the 206.3ha contained within the "direct and permanent" area affected. Committed to maintaining agriculture on 109.44 ha of BSAL within the biodiversity offset areas.<br>The proponent will not mitigate the 171.8ha of BSAL within the subsidence study area (utilised as biodiversity offsets). | In light of the extra 154 ha of BSAL being present there is opportunity to discuss how this can be dealt with while acknowledging the subsidence area BSAL is not available for agriculture. | The verified BSAL located within the predicted subsidence study area will not be available due to the area being part of the Biodiversity offset area. | As a result of an extra 154 ha of BSAL being identified – with 319.52 now being confirmed within the direct and permanent loss area, the proponent should clarify whether their earlier commitment to reinstating more than 227 ha of BSAL will accommodate this recently identified additional BSAL. |
| **4.4.2.2. Repair of BSAL impacts (Page 91)** | The proponent has committed to repairing 62.7ha of BSAL within the "direct and temporary" area affected (after infrastructure and haul roads are decommissioned) although page 66 App W appears to refute this. | Clarification of this. | The RTS reiterates that this area will be stripped and stockpiled adjacent to infrastructure and the same soil replaced. This assumed previously verified BSAL will be returned to BSAL post disturbance in these areas**.** | Further detail on BSAL reinstatement required. Simple replacement of soil is insufficient to meet the pre disturbed condition. |
| **4.4.2.3 BSAL Loss to Mining (Page 91)** | A considerable area of BSAL has been identified which will be fully encompassed by the open cut related mining activities and is unlikely to be available to agricultural production. The proponent has not identified where such areas will be closed off to the | | All land not in the PDF will continue to be used for agriculture | Available information does not identify location of BSAL to provide adequate comment.<br><br>DPI Agriculture requests maps as requested in table 1. |

| DPI Issue – response in RTS | Issue (summary) | Detail required | Response by Proponent | DPI (Agriculture) Reply |
|---|---|---|---|---|
| | mining activities, therefore no estimate of how much BSAL will be taken out of production can be made. | | | |
| **4.4.2.5 Adjoining BSAL (Page 92)** | The proponent has not commented on the effects of the project on adjoining BSAL as raised by the Gateway Panel. | Consideration of impacts on adjacent BSAL land outside the project disturbance footprint area. | All soils outside the PDF will not be impacted by the project. Buffer has now been included as a result of the gateway Panel's recommendations. | Location and detail of buffers applied not supplied. |
| **4.4.2.6 Loss of Farming Land (Page 92)** | Farming land will be lost to biodiversity offset lands. | Acknowledgement of this. | The amended BSAL mapping has reduced the overall areas of BSAL in the offset areas by 54 ha.<br>Previously cultivated areas will still be used for agriculture – no difference in area. Their response reinforces the need for land to be converted to ecological outcomes. | Acknowledge that some BSAL will still be impacted by the land use change. There is a need to consider how the 109 ha of BSAL deemed of less ecological value due to clearing or previous agricultural use will be able to be accessed for agriculture in this situation. |
| **4.4.3 Critical Industry Cluster Impacts** | | | | |
| **4.4.3.1 Equine CIC (Page 93)** | Equine CIC has been mapped in the Bylong Valley region and covers both the open cut mining and biodiversity offset areas. Of the 699.9 ha within the project boundary and 584 ha within the offset areas, a total of 515 ha will be permanently lost to agriculture. The proponent has not provided sufficient information to allow the assessment of the impacts for change in landuse | Losses of equine CIC landuse. | No operating thoroughbred horse studs in the Project area. The CIC area has areas that produce fodder for the horse industry – it is estimated that lucerne hay produced supports about 270 dry mares, or 2.7% of the Upper Hunter Horse population. The project will not impact on the Upper Hunter CIC. All disturbed CIC will be rehabilitated to the LSC within the pre mining range hence it | There are no current operating horse studs in the Project Area because KEPCO has bought the land. Prior to this it was a successful enterprise. This demonstrates that the land is suitable for the equine industry and the rehabilitation objectives should reflect this. |

| DPI Issue – response in RTS | Issue (summary) | Detail required | Response by Proponent | DPI (Agriculture) Reply |
|---|---|---|---|---|
| | on the Equine CIC as a whole. | | will be suited to future equine land use. | |
| **4.4.3.2 Losses of Equine CIC (Page 95)** | All reference to CIC are based on the SRLUP maps (January 2014). .<br>The permanent losses of equine CIC land is the result of a change in land use due to biodiversity offsets. | Losses of equine CIC | See section 4.4.3.1<br>515 ha of equine CIC will go to biodiversity offset but it will still be there**.** | A permanent change in landuse to Biodiversity Offsets should be considered and assessed as a permanent loss of equine CIC, unless the biodiversity offsets are implemented in a way that does not have a negative impact on CIC values. |
| **4.4.4 Water Impacts (Page 97)** | The AIS states "no loss to the current utilised agricultural water available under KEPCO water allocation entitlements is predicted as a result of mining activities" (AIS p95). The impact of KEPCO's allocation on agricultural water use in the area both currently and into the future has not been addressed.<br><br>KEPCO holds existing water license allocations of 2535 units (43.4%of the licensed water availability of the area) but how much of this will be used for agricultural activities, and what impact of this on the broader agricultural region? | Kepco has purchased 2335 ML of water and its impact on agricultural use is not assessed. Question of how much water is available for agriculture on KEPCO owned land so it can continue as a legitimate landuse**.** | 443 ha of land will be changed from irrigation for dryland use in a 100% AWD year reducing agricultural production values of just over $1m in the project.<br>The gross value of agricultural production loss due to the use of potential irrigation water for the project is $2,471 million over the life of the project while the net value is $1203 million in Production years 3 to 10.<br>750 Ml is used annually by Kepco for agriculture. Water licensed to KEPCO which is not used for mining is available for trading with other licenced groundwater users of the Bylong River Water Source. | The Company has indicated that it will seek to mitigate the impacts of reduced water availability to agriculture by carrying out its own irrigated agriculture.<br><br>However, given that this is not a core activity of the project, and the proponent has also indicated that during periods of low water availability irrigated agricultural activities will be scaled back, the proponent should provide an indication of the likely agricultural impacts of these activities ceasing, alternatively commit within its statement of commitments to a minimum level of irrigated agriculture. |
| **4.4.5 Biodiversity Offsets** | It is Agriculture NSW's position that lands set aside for biodiversity offsets should not | That 282 ha of cultivated land be utilised for agricultural production**.** | Reduction of BSAL in offset areas 1,2 and 5 by 54 ha.<br>Support of cleared cultivated | The ability of the cleared/cultivated land to be continued to be used for |

| DPI Issue – response in RTS | Issue (summary) | Detail required | Response by Proponent | DPI (Agriculture) Reply |
|---|---|---|---|---|
| **Impacts** | be BSAL. It is noted that the proponent has tried to minimise BSAL impact from biodiversity offsets however, there is still a net loss of 376.81ha of BSAL to biodiversity offsets.<br><br>A consent condition has also been recommended to require that the 282ha of identified "cultivated" land identified in the AIS be "utilised" for agricultural production, either by the proponent as part of their farming operations, or included in neighbouring agricultural production systems. | | land to be maintained for agriculture.<br>283 ha of cultivated lands to be retained within offset area includes;<br>Offset area 1:75 ha<br>Offset area 2: 106 ha<br>Offset area 4: 69 ha<br>Offset area 5; 13 ha<br>Yarran view; 22 ha<br>These will be utilised based on the requirement for managing adjoining native vegetation for biodiversity. | agriculture is noted. It is recognised that some BSAL land that has high biodiversity value will be removed from agriculture**.** As noted in our response to 4.4.2.6 consideration of the practicality of access and suitability of these sites to undertake an agricultural activity requires attention**.**<br><br>Some of the lightly timbered/vegetated BSAL in the Offset area can be used for high quality grazing. DPI Agriculture recommends that consideration be given to excising the BSAL within the Offset that is used for this agricultural production, including the necessary additional shelter zones of more heavily timbered areas for animal welfare. |
| **4.4.6.1 Biodiversity Offsets** | The proponent is proposing to undertake the reinstatement of 227ha of BSAL to offset the 206.3 ha lost in the disturbance footprint. There will be no reinstatement to offset the loss of 171.8ha in the subsidence study areas nor the 205ha in the other biodiversity offset areas. | There is no reinstatement of the 171.8 ha in the subsidence area or the 205 ha in the other biodiversity offset areas.<br>Can BSAL be reinstated successfully in this situation? | Proponent acknowledges the lack of experience in the general mining area of being able to rehabilitate land to this level. Will use best information to develop rehabilitation strategy, use early trials and have a Trigger Action Response Plan approach to identify and manage short falls | DPI Agriculture welcomes the opportunity to input into the rehabilitation strategy and actively assist in dealing with BSAL and other agricultural land reestablishment outcomes. |

| DPI Issue – response in RTS | Issue (summary) | Detail required | Response by Proponent | DPI (Agriculture) Reply |
|---|---|---|---|---|
| | Questioning that no demonstration that the BSAL can be reinstated or that the proponent is capable of successful reinstatement of BSAL. | | in rehabilitation. | |
| **4.4.6.3 Anthroposols** | In the Interim protocol for site verification and mapping of BSAL, Anthroposols (man-made soils) have not been considered in the soil fertility rankings, and therefore cannot be returned to BSAL, so BSAL cannot be reinstated. However, DPI is willing to consider that if reinstated land can be brought back up to fertility and productivity standards in both dryland and irrigated scenarios, with all of the soil constraints contained within the Interim protocol eliminated, then this could suffice. | How to deal with anthroposols and how they can be reinstated to productive use. | KEPCO will record original soil type stripped and used to rehabilitate BSAL. CEC will also be used to monitor fertility pre mining as part of the reinstatement process, as suggested by DPI Agriculture. | As part of the rehabilitation process, production parameters and the resilience of soil over time should form part of the basis to long term monitoring. This includes water holding capacity, bulk density, chemical and organic components to be monitored for. We acknowledge that other measurements may need to be considered as part of the process. |
| **4.4.7.1 Rehabilitation Trials (Page 103)** | The proponent consulted with DPI Agriculture to develop an appropriate trial design and detailed monitoring program for the reinstatement of BSAL/LSC Class 3 lands and these be available publically in a timely manner. | Consult with Department over trial designs and monitoring land including pasture establishment and agricultural production aspects. More detail is required in relation to trial areas and treatments, | Noted – KEPCO will continue to liaise with NSW Agriculture with trial designs and monitoring methods. Rehabilitation updates will be included in annual reviews. | Consultation with DPI Agriculture should commence as early as possible – on approval of the project and prior to construction phase. |

| DPI Issue – response in RTS | Issue (summary) | Detail required | Response by Proponent | DPI (Agriculture) Reply |
|---|---|---|---|---|
| | The proposed rehabilitation schedule for the project (App W, figure10-14), indicates that the reinstatement of BSAL/ LSC class 3 lands early in the project's life on "Secondary Domain A – Grazing Land" (App W, p.97) so agricultural production aspects including legume establishment in pastures are undertaken. | monitoring, replication etc.<br><br>Any BSAL rehabilitation trials should commence as early as possible to usefully inform the proponent's rehabilitation activities. | | |
| | Rather than just using dry matter yields as the only measure to compare pasture production to the nominated reference site, use also consider pasture and livestock production monitoring so pastures can sustain grazing activities, not just produce vegetation. Manage reference sites the same way that rehabilitated sites are to ensure fair comparisons of pasture and livestock performance. | Information to be included in helping monitor successful agricultural production parameters | Company will use a range of soil, pasture and livestock parameters | DPI Agriculture believe a way forward is to ensure a consultative approach is made to developing a rehabilitation plan with sound monitoring processes that address these suggested methods**.**<br><br>Consultation with DPI Agriculture should commence as early as possible – on approval of the project and prior to construction phase. |
| | Relevance of the Landscape Function Analysis (LFA) to when pastures/ crops have been established. Suggestion is to use LFA for the first 0-5 years or up until a good | Important to consider how agricultural land resilience can be monitored in the longer term. | Reiterated the need for pasture production, pasture composition and livestock performance to be monitored, and updated as required. | Detail on "as required" is requested |

| DPI Issue – response in RTS | Issue (summary) | Detail required | Response by Proponent | DPI (Agriculture) Reply |
|---|---|---|---|---|
| | vegetation cover has been establish then use more relevant monitoring practices as outlined in Lodge reference. | | | |
| **4.4.7.5 Trigger Action Response Plans (Page 106)** | Soil pH unit methodology – prefer calcium chloride ($CaCl_2$).<br>The identified sodicity targets for exchangeable sodium percentage identified is too high -. Soils with an ESP of >6 are generally regarded as sodic. | Consider the use of these tests as part of the development of responses to trigger action response plans.<br>. | Noted TARPs will be prepared as part of the Rehabilitation Management Plan as required. | DPI considers that soil pH methodology and sodicity targets be part of the target tool kit and identified in the rehabilitation management plan.<br><br>Detail on “as required” is requested |
| **4.4.10 Soil Reinstatement Volume calculations (Page 111)** | Query over the volumes which would be available for soil reinstatement. Need to revise with where all soil is coming from clearly.<br><br>A Soil Resource Management Plan will be developed and documented in the approved MOP.” | Detailed methodology of soil volume calculations is sought, including: an analysis of area requirements based on LSC/BSAL and the consideration of unconsolidated material that will require a factor to deal with initial swelling associated with land reinstatement. | Appendix V of the EIS outlines the methodology for calculation for available soil resources and total volumes available.<br>Other parts of the EIS outline soil volume requirements to achieve post mining LSC and BSAL areas etc. Consider that available soil resources are in excess of what is required. | Due to the new identified BSAL revised harvestable soil volumes is required. This is essential to ensure adequate supply for rehabilitation. |

**Response to Submissions – Socio-economics**

| *DPI Issue – response in RTS* | *Issue (summary)* | *Detail required* | *Response by Proponent* | *DPI (Agriculture) Reply* |
|---|---|---|---|---|
| **4.4.3 Critical Industry Cluster Impacts** | | | | |
| ***4.4.3.3 Losses of Scenic and Landscape Values (page 95)*** | The Mining and Petroleum Gateway Panel (M&P GP) report concluded that the "loss of scenic and landscape values will have a significant impact on the Equine CIC" (M&P GP Report Section 5.2.5 'The loss of scenic and landscape values', p31). The Proponent has not provided sufficient information to allow the assessment of the impacts from change in land use on the Equine CIC as a whole. | Assessment of loss of scenic and landscape values that will have a significant impact on the Equine CIC. | Addressed in the Visual Impact Assessment (Appendix Y of the EIS).<br>Not considered to result in a significant long term visual impact. The impact of direct views to the open cut mining areas would be reduced as progressive rehabilitation is undertaken. Generally, these visual impacts would be limited to a period of up to 10 years after which rehabilitation areas would be established.<br>The Project is generally shielded from views from the vehicles travelling along the Bylong Valley Way.<br>The VIA identifies that existing woodland vegetation screens views to the Project from both the residence and equine facilities of Tinka Tong, a private freehold property with residence and equine facilities. "While this vegetation is intact, visibility and visual sensitivity are reduced. Without vegetation screening, as | Accepted, however, a plan should be put in place to revegetate any important screening for areas of high visual sensitivity lost to drought or bushfire. |

| | | | | |
|---|---|---|---|---|
| | | | after a bushfire event or drought induced canopy loss, this property would have high visual sensitivity to the Project." | |
| **4.4.8 Socio-economic Aspects** | | | | |
| **4.4.8.1 Agricultural Support Services (Page 107)** | 2,400ha of mapped Equine Critical Industry Cluster (CIC) land located within the Agricultural Assessment Areas representing 0.94% of the mapped area (Section 3.5, p33). There are currently no thoroughbred enterprises in the area however the Proponent has estimated the annual gross value lost would be $7,860,620 (Table 27, p58). | The potential add-on impacts on the Equine CIC as a whole remains unquantified.<br>Not adequately covered in the AIS (Appendix X). | Section 5.5.2 of the Economic Impact Assessment (Appendix AE of the EIS) specifically assesses the direct opportunity cost and potential direct and indirect regional economic impacts of utilising Equine CIC land for the Project. | The proponent has not made any estimate of the significance of this figure to the Hunter equine industry (i.e. as a percentage of the industry). However, the region accounts for a "very large proportion of the national economic value of thoroughbreds" (The Upper Hunter Region Equine Profile, June 2013, NSW DPI). Demand for Australian thoroughbreds plus horse stud and breeding services was worth $728M to the Australian economy in 2008-09 (ABS, Value of Sport Australia 2013, Table 8.6). As such it appears that the estimated loss of gross annual production would be likely to be less than the 5% threshold recommended by NSW DPI as a significant threshold (NSW DPI AIS technical notes, April 2013, Section 4.3, p9). |
| **4.4.8.2 Processing and Value Adding Industries (Page 108)** | The Proponent has not provided sufficient information to allow the assessment of the impacts from change in land use on the Equine CIC as a whole which is a value adding industry. | Not adequately covered in the AIS (Appendix X). | Addressed in response to 4.4.8.1 | See above. |

| | | | | |
|---|---|---|---|---|
| **4.4.8.5 Agricultural Enterprises (Page 109)** | The Proponent indicates that 161.8ha of "Non-rehabilitated Infrastructure" will remain including the rail loop which covers 88.3ha. | It is not clear how this area would be managed after mine closure, by whom and what the impacts of its management would be on adjacent agricultural enterprises. | The decommissioning and rehabilitation of the rail loop is discussed in Section 4.7.2. | The rehabilitation plan for the rail loop area in Section 4.7.2. of the RTS indicates the area will be "topsoiled, seeded and revegetated with native grasses" which seems appropriate. The RTS does not state how this area would be managed after mine closure (would it be suitable for grazing?) and by whom. |
| **4.4.8.7 Agricultural Infrastructure – Increased Traffic on Bylong Valley Way (Page 110)** | The project has the potential to increase traffic on the Bylong Valley Way which links Bylong to the Golden Highway and Muswellbrook Shire. | Muswellbrook Shire Council should be included as a signatory to the proposed VPA to ensure Bylong Valley Way is maintained to a standard so that agricultural and equine industries users are not adversely impacted. | MSC has been consulted with regard to the Project. It is noted that a late submission has been provided by MSC on 15 March 2016 following the public exhibition of EIS. A response to this submission will be prepared and submitted at a later date. The response will address the issue of road maintenance raised by DPI Agriculture in their submission. | "MSC has been consulted" but concerns about road maintenance have not been addressed. |

**End Attachment C**

**Forestry Corporation of NSW** ABN 43 141 857 613

**Western Region**
Cnr Monash and Chelmsford Streets
Dubbo NSW 2830
(PO Box 865 Dubbo NSW 2830)

**T:** 02 6841 4205
**E:** jarod.dashwood@fcnsw.com.au

Matthew Riley
GPO Box 39
SYDNEY NSW 2001

30 May 2016

Dear Matthew,

RE: RESPONSE TO SUBMISSIONS - BYLONG COAL PROJECT

Forestry Corporation of NSW (FCNSW) is concerned that the response to submissions (RTS) associated with Bylong Coal Project failed to address a number of commercial and safety matters.

FCNSW asks that the proponent explicitly acknowledge that:

1. FCNSW will be granted an unrestricted 'right of way' for State forest access;

2. The use of quantifiable methodologies will be agreed by the parties to determine the compensable losses suffered by FCNSW for:

    a. Unrepairable damages to the productivity of FCNSW's estate (i.e. areas of ponding); and
    b. Damage and loss of value to existing and future forest products.

3. KEPCO will accept ongoing liability for areas of State forest damaged or disrupted by subsidence where repairs or stabilisation works are not performed on account that KEPCO considers it unsafe to do so.

Yours Faithfully,

Jarod Dashwood
Forest Occupancy Supervisor
FCNSW WESTERN REGION

Transport for NSW

PCU065209

Matthew Riley
Senior Planning Officer
Resource Assessments
Department of Planning & Environment
GPO Box 39
Sydney NSW 2001

Dear Mr Riley

**Bylong Coal Project (SSD 6367) - Response to Submissions**

Thank you for your letter dated 1 April 2016, regarding the above. Transport for NSW (TfNSW) has reviewed the documentation and provides no comments in relation to the proposal.

Please note for future reference; when sending proposals to TfNSW via email could you kindly use the following email addresses;

TfNSW: development@transport.nsw.gov.au

Thank you again for the opportunity of providing advice for the subject proposal. If you require clarification of any issues raised, please do not hesitate to contact Dorna Darab on 8202 2179 or email dorna.darab@transport.nsw.gov.au.

Yours sincerely

2/5/16



Mark Ozinga
**Principal Manager Land Use Planning & Development**
**Transport Strategy**

CD16/04517

# NSW RURAL FIRE SERVICE

Director – Resource Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY 2001

Your reference: SSD 14_ 6367
Our reference: D15/2849

29 July 2016

**Attention:** Matthew Riley

Dear Sir/Madam,

**Bylong Coal Project – Notice of Exhibition**

Reference is made to Council's correspondence dated 1 April 2016 seeking comments regarding the Reponses to Submissions (RTS) for the above proposal, previously referred to the New South Wales Rural Fire Service (NSW RFS) on the 21 September 2015 in accordance with Section 89F of the *Environmental Planning and Assessment Act 1979.*

The New South Wales Rural Fire Service advises that it has no objection to the RTS submitted with the referral, subject to the recommended conditions set out in our letter dated 2 October 2015.

If you have any queries regarding this advice, please contact Emma Jensen, Development Assessment and Planning Officer, on 1300 NSW RFS.

Yours sincerely,

Jason Maslen
Team Leader, Development Assessment and Planning
Planning and Environment Services (East)

Postal address
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MID-WESTERN REGIONAL COUNCIL
PO Box 156, MUDGEE NSW 2850
86 Market Street, Mudgee | 109 Herbert Street, Gulgong | 77 Louee Street, Rylstone
T 1300 765 002 or 02 6378 2850 | F 02 6378 2815
E council@midwestern.nsw.gov.au

JR | A420176

26 April 2016

Matthew Riley
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Matthew

**SUBJECT: BYLONG COAL PROJECT (SSD 6367) RESPONSE TO SUBMISSIONS**

Thank you for providing Mid-Western Regional Council with the opportunity to provide further feedback in relation to the Kepco Bylong Coal Project.

After reviewing Kepco's response to submissions, Council would like to reconfirm its position in relation to the issues/concerns identified in the original submission to the EIS dated 20 November 2015.

It is acknowledged that Kepco has undertaken further work to assess the need for a Temporary Workers Accommodation (TWA) facility. This analysis has resulted in a revision of the accommodation requirements to support the workforce during the construction phase of the project. The revision includes both a reduction in the number of beds provided in a TWA facility as well as a reduction in the number of years over which the facility would be utilised. Kepco has also presented additional information regarding the availability of short and longer term accommodation as supporting evidence.

Despite these revisions, Council does not support the use of a TWA facility for the construction phase of the Kepco Bylong Coal Project.

The analysis undertaken by Kepco to demonstrate that there is insufficient accommodation available is inconsistent with the past experience. The Mid-Western Region has accommodated the significant expansion of multiple mining projects at the same time in recent years and the local housing market has responded to the demand for additional housing and short term/serviced accommodation.

Council is of the firm view that the local housing and accommodation market can satisfy the requirements of the project and respond appropriately to ensure that the construction workforce can be accommodated. This will generate positive economic benefits for the Region and also continue to support the social objective of one community.

Given Council's position in relation to a TWA facility, it is important that a traffic and transport scenario without this facility is not discounted in the project planning. Council is continuing its discussions with Kepco in relation to the upgrades and ongoing maintenance of the local road network to accommodate the Bylong Coal Project.

If you wish to discuss Council's position further, please do not hesitate to contact myself or Julie Robertson on 02 6378 2850.

Yours faithfully,

BRAD CAM
GENERAL MANAGER

muswellbrook shire council

**Enquiries**
**Please ask for** Steve McDonald
**Direct** 02 6549 3700
**Our reference**
**Your reference**

9 August 2016

**Mr Stephen O'Donoghue**
**Team Leader, Planning Assessment**
**Dept of Planning & Environment**
**GPO Box 39**
**SYDNEY NSW 2001**

Dear Mr O'Donoghue,

**RE: KEPCO Bylong Coal Project**

I refer to an application from KEPCO Bylong Australia ("the Proponent") for the Bylong Coal Project ("the Project") and make the following submission on behalf of Muswellbrook Shire Council ("Council") with respect to the Proponents Response to submissions (RTS) dated 7 July 2016. Council appreciates the opportunity to comment on this document.

Council raises the following concerns in relation to the Proponent's response:

Residential Demographic Predictions

Council remains of the strong opinion that the majority of future mine workers are not likely to reside in the Mid-Western Regional Council LGA but instead reside in the Hunter Valley. Existing mining workers' habits would suggest they will temporarily board at or near the mine and travel home at the end of roster rotation shifts using the Bylong Valley Way and the Golden Highway, as it is the shortest route back to the Hunter. This will provide far greater traffic numbers than predicted in either the original EIS or the revised Appendix D "Revised Traffic and Transport Impact Assessment" provided in the Response to Submissions.

Road Safety

Council also remains steadfastly of the view that the Bylong Valley Way is not safe to use for the purposes of mining traffic that Council anticipates will be generated by the proposed development, both during construction, and for the ongoing operation of the mine. This is supported by Council's own Road Safety Audit and accident history of this road with its existing traffic loadings. Council is concerned that the use of this road in its current state is not compatible with mineworkers travelling to and from home at the beginning of, or particularly at the end of 3-4 consecutive 12 hour shifts that are proposed by the Bylong mine. Without adequate and credible traffic predictions it is difficult for Council to determine the works that would be needed to upgrade the Bylong Valley Way to a standard that would provide an adequate level of safety.

Mine Support Services

The KEPCO Bylong project EIS and the Response to Submissions Appendix D (section 5.8) predict that the majority of the proposed mines support services will originate from the Central West.

It is well known that the Hunter is the primary source of coal mine support services in NSW. This is evident in the support of existing mining operations in the Gunnedah and the Western coal fields. Whilst some services may have a depot in Mudgee or Gulgong, Council believe much of the support will originate from the Hunter. This support will consist of transport in light and heavy vehicles, the later a concern for increased road maintenance. As with the demographic predictions, Council consider the mine support services predictions to be inadequate to adequately assess safety or road maintenance implications of the proposal.

Residential Demographic Study

Council has determined to fund a Residential Demographic Study based on the employment needs of the KEPCO Bylong proposal, the location of known residential locations of suitable and potentially available employees and the trends established with existing coal mines in NSW. Council plans to use the outcome of this Residential Demographic Study in support of future submissions.

Council understands that DP&E was to commission a peer review of the social impacts of the proposed project. We ask if we could be advised of the progress of this review and if a copy of it would be available for Council's use to assist in the undertaking of the Residential Demographic Study.

Council appreciates the opportunity to comment and would be pleased to provide additional information if requested.

Yours faithfully

Steve McDonald
**General Manager**

**Timnath Pty Limited**
ACN 001 411 310
**"Budden", Bylong Valley Way**
**BYLONG NSW 2849**
All correspondence to:
P.O. Box 97
WENTWORTHVILLE NSW 2145

6 May 2016

The Executive Director
Resource Assessments and Business Systems
Department of Planning and Environment
GPO Box 39
SYNDEY NSW 2001

Attention: Mr. Stephen O'Donoghue

**RE: RESPONSE TO SUBMISSIONS ON THE BYLONG COAL PROJECT REGARDING UNDERGROUND WATER**

Dear Sir,

I refer to the proposal by Kepco regarding the Bylong Coal Project.

I am the Managing Director of Timnath Pty Limited ("Timnath") which is the owner of the Beef Cattle enterprise on the property "Budden" located on the Bylong Valley Way, BYLONG NSW 2849. "Budden" relies heavily on groundwater to water stock and irrigate pastures ('the water"). Without the water, even for a matter of days, "Budden" would cease to operate and stock would die.

I am very concerned about the impact Kepco's of proposed Coal Mining operation on the water at "Budden".

On 4 November 2015, Timnath submitted an objection to the Proposal of the Kepco Coal Project ("the Timnath Submissions"). **Enclosed** is a copy of the Timnath Submissions.

In response to the Timnath Submissions, and submissions by other parties, Kepco produced a "Response to Submissions on Groundwater" ("the Groundwater Response"). The Groundwater Response purports to address the concerns raised in the Timnath Submissions and the submissions of the other parties.

I have read the Groundwater Response by Kepco and compared it to the Timnath Submissions.

**The Kepco Groundwater Response DOES NOT address any of the concerns raised in the Timnath Submissions. Kepco is silent on the concerns raised by Timnath.**

We request that you seek a specific response to the following concerns raised in the Timnath Submissions ("the concerns in the Timnath Submissions"): -

1. **At paragraph 12 on page 4 the Timnath Submissions state;**

   *"The EIS, significantly, fails to suggest, inter alia:*

   a. *what **immediate steps** the proponent would take to provide adequate quantities of uncontaminated water to affected neighbouring landholders in order for them to continue their primary production activities (NB this has been the legal right of the landolders for many years and of Timnath for in excess of 40 years)*

   b. *what **medium to long term steps** the proponent would take to rectify the cause(s) of the disturbance to the supply of uncontaminated water to neighbouring landholders in accordance with their entitlements;*

   c. *what **medium to long term steps** the proponent would take to remediate any environmental damage resulting from disturbance to the continued enjoyment of existing water entitlements of neighbouring landholders;*

   d. *what **compensation for economic and non-economic loss** the proponent would make to the affected landholders resulting from their disturbance of their existing water entitlements, and how such compensation would be assessed, and, in the event of dispute in that regard, determined;*

   e. ***how the proponent's compliance** with each of the above issues would guarantee and secured in the future.* ***(emphasis added)***

At page 85 of the Kepco "Response to Submissions on Groundwater" in clause 7.2.1 the proponent states: -

> *"...Compensatory water supply measures will provide an alternative supply of water that is equivalent to the loss attributable to the mine development. Equivalent water supply will be provided as soon as practicable from the loss being identified as a result of the Project, unless otherwise agreed with the landowner. The Water Management Plan will set out the process by which potential impairment of landholder bores will be assessed and compensatory arrangements in the form of make good agreements."*

There is no reference in the Kepco Response to where the extra water may be obtained and it is certainly, to my knowledge, not available at the site. Further, Kepco is not recognising any of the "time factors" involved in negotiating, purchasing, transporting, delivering and storage on site. It must be recognised that at all times live cattle must have water to drink and stock feed must have water to grow. Cattle being without water, even for one day, is catastrophic and the Kepco Response is silent on this issue.

At page 79 of the Kepco Response to Groundwater" in the last paragraph it states: -

> *"...there is some uncertainty at a local level due to the groundwater flow being controlled by varying extents by observed intra- and inter-formational heterogenerity in the rock units. Dipping beds, faulting and igneous intrusionsal influence groundwater and hydraulic gradients."*

The "uncertainity" referred to on page 79 of the Kepco Response causes real doubt as to the practicality of the mine. The "uncertainty" of water is identified over and over in the Kepco Response including on page 67, 79 and 80.

The Kepco Groundwater Response makes a vague reference to "Make Good Agreements" which Kepco proposes to enter into with affected landholders AFTER the mine has been approved (Kepco Groundwater Response at Part 7.2.1 at page 85 – 86). Such a proposal is included at the end of the Kepco Groundwater Response and is without detail.

If the mine is approved, the bargaining power between landholders and Kepco will significantly favour Kepco and the terms of any such agreement are, at this time uncertain. No one could claim that the proposed "Make Good Agreements" do anything to address the concerns raised in the Timnath Submissions (detailed above) because Kepco do not state with any certainty what will occur, and when, if a landholder loses their water.

It should be a requirement that BEFORE the mine is approved that Kepco enter into an enforceable agreement with Timnath and other landholders that specifically address the concerns raised in the Timnath Submissions (detailed above). Specifically, what Kepco will do, and when, if a landholder loses their water at any stage after the mine is approved.

Finally, we note that Kepco state at, Part 7.2.1 on page 85 of the Kepco Groundwater Response, that: -

> *"During this consultation, KEPCO has **agreed** to install electronic data loggers to record groundwater levels at surrounding properties including "Budden'..."*

There is no **agreement** between Kepco and Timnath to install electronic data loggers to record groundwater levels at "Budden". Rather, Timnath has undertaken this work itself without any assistance from Kepco.

Given the above, we request that Kepco be required to address the concerns in the Timnath Submissions, as detailed above, in detail and enter into an enforceable agreement to protect the water on Budden BEFORE the mine is approved.

Yours faithfully,
TIMNATH PTY LIMITED

R.J. Weaver
MANAGING DIRECTOR

WOLLAR PROGRESS ASSOCIATION

C/O- POST OFFICE

WOLLAR NSW 2850

Stephen O'Donoghue
Team Leader - Resource Assessments
Department of Planning & Environment

Tuesday 26 April 2016

Dear Steve,

Comments on KEPCO Response to Submissions (RTS)

Wollar Progress Association ('the Association') raised a number of issues in our submission objecting to the proposed Bylong Coal Project. The submission is referred to as SIG 24 in the RTS.

We consider that these issues have not been adequately addressed in the RTS:

1. Response to issues relating to additional trains on the Sandy Hollow to Gulgong Railway Line

5.10.2 Rail Activity and Air Quality in Wollar Village (Main Report p 356)

Our submission stated that:

'*Wollar Progress Association is concerned that the increase number of rail movements from the Bylong proposal, including a possible increase in the length of trains, will cause more trains from the three existing mines to sit idling in the Wollar rail loop. This lies immediately to the east of the village.'*

'*The cumulative impact of increased train movements on the Sandy Hollow railway line caused by the Bylong Coal Project has not been adequately assessed*.'

The RTS response entirely misinterprets the issue by stating:

'*The Project will not result in any additional trains on the Sandy Hollow to Gulgong Railway Line to the west of the Bylong Rail Loop and hence there will be no changes to air quality in the vicinity of the Wollar Village due to the Project.'*

The Association is concerned that there has been no assessment of the increased period of time that trains from the Ulan, Moolarben and Wilpinjong mines will be sitting idling in the Wollar rail loop, waiting for train movements into and out of the Bylong Mine.

This issue has not been addressed.

We note that the issue of additional trains idling in rail loops was also raised by Hunter Communities Network (SIG 8)

5.22.17 Train Movements (Main Report p 460)

The submission was referring to all rail loops along the Sandy Hollow to Gulgong Railway Line. The RTS refers only to assessment of noise levels and management of the Bylong Mine rail loop.

The RTS refers to ongoing consultation with ARTC in relation to accommodating Project-related traffic on the Sandy Hollow to Gulgong Railway Line and that:

*'WorleyParsons has completed various rail operational assessment which has considered train idling times, tunnel ventilation times, increased noise levels and impacts to rail crossings on properties and on roads.'*

However, none of this information has been provided in the Revised Traffic and Transport Impact Assessment (RTS App D).

The only reference to information from ARTC is in App B – a letter relating to train length and line capacity. An assessment of the impact of additional trains on the line has not been provided.

Will the additional '*various rail operational assessment'* be made available to the public?

2. Response to issues concerning increased traffic impacts on Wollar Village and road safety

The Association notes the revised Traffic and Transport Impact Assessment (RTS App D). However, there are still a number of outstanding issues that have not been addressed.

2.1 Formal road safety audit

The revised traffic assessment suggests that '*a formal road safety audit be completed on the existing road conditions, in order to confirm the most appropriate road upgrade measures*.' (App D p80)

However, there is no indication of when this will occur or by whom. The Association considers that road safety is a critical issue for the Bylong Mine proposal that should not be pushed off until after the approval and considered while the mine is under construction.

2.2 Response to issue of Safety and Amenity of Wollar Village (Main Report 5.22.12 p 457)

The RTS indicates that '*the majority of Project related traffic is proposed to travel along Wollar Road to and from Mudgee, with a minor proportion potentially utilising Ulan-Wollar Road from Wollar village.'*

It is predicted that a maximum of 230 vehicles per hour in peak hour could travel through Wollar with an increase of approximately 478 vehicles per day.

The social, noise and safety impacts of this massive increase of up to 600% in daily traffic movements has not been assessed.

2.3 Route for oversized and overmass vehicle movements (App D 5.13 p 68)

The revised traffic report states that:

*'Oversized vehicles will need to travel to the Project site via Wollar Road due to an overhead rail bridge on Bylong Valley Way east of Wollar Road and the general steep terrain and tight horizontal curves on Bylong Valley Way'*

The report does not identify whether the oversized vehicles will travel the entire length of Wollar Rd or along Ulan-Wollar Rd through Wollar village and onto Wollar Rd to Bylong Valley Way.

While the Wollar Rd through the Munghorn Gap Nature Reserve is a designated B-Double road, the revised traffic report has identified existing safety deficiencies including steep sections of road on Wollar Road east of Wollar and through Munghorn Gap Nature Reserve (App D 2.13 p38). This route is not suitable for oversized and overmass vehicles.

The Association is aware that Mid-Western Regional Council has applied for Royalties for Regions funding to upgrade the Wollar Rd east of Wollar. However, there is no guarantee that this will be successful or timely in relation to the requirements of oversized and overmassed vehicles delivering construction materials to Bylong Mine.

The Association assumes that these large vehicles are likely to travel through Wollar village from the Ulan-Wollar Rd. This impact has not been assessed.

Likewise for the route of transport of dangerous goods including explosives, emulsions, diesel, various gases and other hydrocarbons (App D 5.14 p68). There is no indication provided about the route for dangerous goods.

The Association considers that the issue of safety and amenity of Wollar village has not been addressed.

3. Social Impacts

The RTS incorrectly states that '*The population decline experienced in Wollar SS between 2001 and 2006 is unlikely to be a result of cumulative mining expansion in the area*.'

The acquisition of property for the Wilpinjong Mine commenced in 1998 with the purchase of Cumbo Station by agents for Excell prior to the exploration licence being granted in 2003.

The acquisition of property on the Bungulla estate continue during the assessment period of the proposed mine and the entire area had been acquired by the time approval was granted in February 2006.

This included a substantial number of families, including children attending Wollar Public School, and active members of community organisations including Church congregations. The downturn of business at Wollar General Store commenced during this time.

We consider that the incorrect information provided in the KEPCO RTS may be a result of the inadequate SIA provided for the Wilpinjong extension project.

This will need to be addressed in the peer review being conducted by Elton Consulting.

The cumulative social and environmental impact of mining in the region has been significant since the commencement of the Ulan Mine in 1985. It is misleading for KEPCO to be stating otherwise.

Yours faithfully

B. Smiles

Bev Smiles
Secretary