November 6, 2015

Department of Planning and Environment

23-33 Bridge Street

Sydney

NSW 2001

To whom it may concern,

RE:* SSD 14_6367 *Bylong Coal Project - Submission on behalf of BirdLife Southern NSW

BirdLife Australia is Australia's oldest national conservation organisation, tracing its ancestry back almost 115 years to the Royal Australasian Ornithologists Union (RAOU). BirdLife Australia remains a science-based, grass roots, 'not-for-profit' organisation with 12,000 financial members and over 85,000 supporters. Our primary objective is to conserve Australia's native birds and their habitats; guided by a committee of eminent ecologists.

BirdLife Australia also coordinates the Woodland Birds for Biodiversity project, with a key focus on the recovery effort for the critically endangered Regent Honeyeater (*Anthochaera phrygia*), a 'flagship species' for the conservation of a suite of threatened and declining woodland birds in south-eastern Australia.

We appreciate the opportunity to provide comments to the Department regarding the proposed Bylong Coal Mine (SSD 14_6367).

In addition to our broader concerns regarding Bylong Coal Mine's contribution to climate change, we have strong concerns regarding direct impact to native birds and their habitat as a result of this mine proposal. We understand efforts will be made to 'offset' impacts, however, we are more immediately concerned that a large number of impacts have been overlooked or inadequately addressed. Many of these issues appear as shortfalls in the Ecological Impact Assessment (EIA) prepared by consultant, Cumberland Ecology on behalf of Hansen Bailey.

For ease of reading and address we have listed all our concerns as dot points (below).

1. The Bylong Valley has been designated by BirdLife International as part of the Mudgee-Wollar Important Bird and Biodiversity Area (IBA no. 24449 http://www.birdata.com.au/iba.vm).

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The IBA was designated because it is a stronghold for the Regent Honeyeater, Diamond Firetail *(Stagonopleura guttata) and* Rockwarbler *(Origma solitaria).* All three of these species have been recorded within the *proposed* Bylong Coal Project Area. BirdLife Australia is concerned that there has been no consideration of this IBA in the EIA, and that therefore the impact upon this IBA have not been considered.

2. The Bylong region is an important foraging (and likely breeding) area for the Regent Honeyeater which is listed as Critically Endangered under the Federal EPBC Act, the New South Wales TSC Act and internationally under IUCN Red List. The EIA lists a minimum of 169 ha of the Project Application Area that is considered essential habitat for the species, however Birdlife Australia believe the proponent did not accurately quantify the full extent of potential Regent Honeyeater habitat loss as a result of the Bylong Mine.

3. BirdLife Australia are concerned that the BirdLife Australia Atlas was not consulted during the EIA process. The BirdLife Australia Atlas contains many important bird records from within and around the Bylong Coal Project area. These records include multiple threatened species, which have not as yet been incorporated into the NSW Wildlife Atlas. BirdLife Australia requests that the proponent makes more effort to understand the spatial coverage of threatened woodland birds across the entire Bylong Coal site, particularly the open cut and infrastructure areas which will permanently remove important lowland, open grassy woodland and shrubby woodland habitat and significantly impact upon the Regent Honeyeater, Turquoise Parrot (*Neophema pulchella*), Hooded Robin (*Melanodryas cucullata cucullata*), Brown Treecreeper (*Climacteris picumnus victoriae*), Speckled Warbler (*Chthonicola sagittata*) and Grey Crowned Babbler (*Pomatostomus temporalis temporalis*). The Bylong Valley is a core breeding area for all of these species which are declining in the Hunter Valley.

4. The Hooded Robin is approaching extinction in the Hunter Valley and the Bylong Coal Mine is likely to severely impact one of the last populations of this species in the Hunter Valley. This has not been addressed adequately.

5. Birdlife Australia is aware of state-significant populations of breeding Turquoise Parrot and Hooded Robin as well as healthy populations of Grey-crowned Babbler, Speckled Warbler, and Brown Treecreeper in areas of woodland that will be permanently removed as a result of the Bylong Coal Project. BirdLife Australia believe the mine will have significant impact on these species and would like to

see a Species Impact Statement (SIS) produced to follow due procedure. Significant impact is highly likely due to the already low amount of lowland woodland remaining in the Bylong region at present.

6. BirdLife Australia is seriously concerned that the proponent has overlooked the important fact that one of the dominant ecological communities to be significantly impacted in the Project Application area, *'Hunter Valley Footslopes Slaty Gum Woodland'* is listed as a *'Vulnerable Ecological Community'* under the TSC Act and is also a '*Critically Endangered Ecological Community'* (CEEC) under the EPBC Act known as *'Central Hunter Valley eucalypt forest and woodland ecological community'.* We note the following statement in the EPBC Act Approved Conservation Advice for this CEEC "*It also occurs in subregions adjacent to the Hunter Valley IBRA subregion; for example, in the Goulburn Valley in the Kerrabee IBRA subregion (SYB01)".*
CEEC are regarded as Matters of National Environmental Significance (MNES). This community is also extremely important threatened woodland bird habitat. The CEEC was listed under the EPBC Act in May 2015; this listing took place four months before the submission of the Bylong Project EIS. BirdLife Australia are concerned that Bylong Coal (KEPCO) and its consultants are ignoring the presence of this CEEC in their Project area. A total of 1,144 hectares of "Hunter Valley Footslopes Slaty Gum Woodland" is present and subject to impacts; this is the minimum amount of the total extent of the CEEC present on the Bylong Coal Mine Project Area. BirdLife believe it may be more extensive. KEPCO must address the presence of this CEEC prior to this project being approved by the Government, even if this means further ecological survey and a revised EPBC Referral.

7. BirdLife Australia is concerned with a statement in section 2.4.15 of EIA that states

"*The targeted species surveys generally utilised survey techniques outlined within OEH guidelines in some instances the recommended effort was not utilised*" This is not good enough. The state and federal guidelines for threatened bird survey are already quite minimal. To not adhere to these guidelines for a large project like this is inexcusable. Inadequacy of survey effort reduces our confidence in the level of rigour of the surveys undertaken for the Bylong Coal Project.

We recommend that a BirdLife-endorsed ecologist is funded to undertake the appropriate woodland bird surveys on the proposed

project sites to ensure bird and habitat surveys are adequate and up to standard.

8. BirdLife Australia is concerned with the inadequacy of addressing the likelihood of the Endangered Swift Parrot (*Lathamus discolor*) occurring within the Project site, through both inadequate target survey and habitat assessment. A paragraph in section 2.4.15 of the EIA states "*Available information suggests that the area surrounding the Study Area is not a major foraging area for this species (Swift Parrot) and it is considered that the survey effort for the species is sufficient."*

BirdLife Australia do not believe the survey effort for the Swift Parrot was sufficient and ask the proponent to inform and provide evidence, specifically:

i. when the targeted surveys for Swift Parrot took place within the Bylong Project area?
ii. where the targeted surveys for Swift Parrot took place within the Bylong Project area?
iii. what methods were used for targeting Swift Parrot?
iv. what known Swift Parrot forage tree species were in flower during the study (from 2012 to 2015) and how much area was surveyed over how many days?
v. which individuals undertook the surveys for Swift Parrot and what is their experience in identifying this species by both sight and call. BirdLife will only accept adequate survey effort if it was undertaken by a recognised expert or someone who is experienced in the survey of this species and is familiar with them in the field.

9. BirdLife Australia disagrees with Cumberland Ecology's statement that "the area surrounding the Study Area is not a major foraging area for this species (Swift Parrot)". We believe that insufficient survey efforts have been conducted in the Bylong region for Swift Parrot and many other woodland birds to date, largely owing to lack of public access over large areas of the region including the proposed Bylong Coal Project Area. Our knowledge of in-situ habitat suggests the area should be recognised as important Swift Parrot foraging habitat. This is owing to the Project site's position between three known major Swift Parrot foraging areas: Capertee Valley, Mudgee – Wollar and the Central Hunter Valley, and the high abundance and coverage of at least three of the Swift Parrot's preferred foraging trees, White Box *(Eucalyptus albens),* Yellow Box *(E.melliodora)* and Blakely's Red Gum *(E.blakelyi)* as well as other

important feed tree species like *E.caleyi subsp. caleyi,* Coastal Grey Box *(E.moluccana)* and Mugga Ironbark *(E.sideroxylon).*

It is highly likely that the Project site offers an important stop off point for Swift Parrot when feed trees are in flower or expressing lerp. To that end, the Project site should be considered a significant corridor for the endangered Swift Parrot and the critically endangered Regent Honeyeater, as both species have overlapping foraging requirements and movement patterns. It is worth noting that the Swift Parrot has recently been upgraded to Critically Endangered under the IUCN criteria and a nomination for it to be listed as Critically Endangered under the EPBC Act has been submitted.

10. The presence of Brigalow *(Acacia harpophylla)* and Weeping Myall *(A.pendula)* within the Project Area has been understated. The consultants, *Cumberland Ecology* and *East Coast Flora* have assumed that the populations of Brigalow and Weeping Myall present in the Bylong Project Area are 'planted', however this assumption lacks supporting evidence. We believe the habitat, climatic conditions and geographical setting of the Project Area is suitable for these species to occur naturally. We specifically note that it is a summer rainfall dominant region with extensive, deep alluvium and Permian shale-derived soils including cracking clays. These conditions are very similar to elsewhere in the eastern range of these two *Acacia sp.* from New South Wales to central Queensland (the Brigalow Belt South Bioregion). We believe the populations of these *Acacia sp.* are close to the south-eastern limits of their natural ranges and were not planted. The presence of abundant Tiger Orchid *(Cymbidium canaliculatum)* which is also close to the south-eastern limit of its range in the Bylong area is notable as it is a species that occurs extensively across the same range, climate and soil types as the two *Acacia sp*. The presence of a significant, natural population of Tiger Orchid at the limit of its range supports the view that the Brigalow and Weeping Myall are also natural populations close to the limit of their natural range. The Precautionary Principal should apply and these populations of Brigalow and Weeping Myall should be treated as natural and therefore potential for significant impact must be assessed under the TSC Act and EPBC Act. The Brigalow population qualifies as the Brigalow (*Acacia harpophylla* dominant and co-dominant) Endangered Ecological Community (EEC) listed under the EPBC Act. BirdLife believes the project will have significant impact upon these species and ecological communities.

11. BirdLife does not believe KEPCO and their consultants have adequately addressed the issue of loss of habitat connectivity as a result of the Bylong Coal Project. The Project will cause impact on the Great Eastern Ranges Corridor. Large areas of vegetated ridgeline in the south of the proposed open cut and overburden dumps (Growee Range) will be isolated from vegetated ridgeline immediately to the north (Bylong Range). This will occur through loss of paddock trees and shelter belts as well as roadside plantings that currently connect this land. Threatened woodland birds in the Project area including Hooded Robin, Grey-crowned Babbler, Brown Treecreeper, Diamond Firetail, Speckled Warbler and Turquoise Parrot are known to use paddock trees and these lowland shelter and shade belts for movement, foraging and likely breeding. Loss of fragmentation of these lowland treed areas will significantly impact these species.

12. The Painted Honeyeater *(Grantiella picta)* was listed as Vulnerable under the EPBC Act as of July 2015 and is listed as Vulnerable under the TSC Act. It therefore should be addressed as such in this report. It is expected that the Bylong Coal Project will have significant impact on this species due to predicted loss of extensive areas of trees, particularly *Eucalyptus sp* and *Acacia sp.* bearing mistletoes (*Amyema* spp.) which are the primary, essential food source of this specialist bird species. Because of this, KEPCO should produce a revised EPBC Referral to address the impacts on this species. The same should be undertaken for the Swift Parrot and the CEEC and EEC mentioned in previous dot points (namely the *Central Hunter Valley eucalypt forest and woodland ecological community CEEC* and *Brigalow EEC*).

13. There is no mention of the threatened species that have been recorded during the extensive Bylong Coal 'Exploration Program' EIA and pre-clearing surveys that have taken place over the years at Bylong Coal Mine. Such reports include those written by Eco Logical Australia Pty Ltd. These reports contain spatial records of target threatened woodland birds among other information. The lack of reference to this huge volume of information and data reflects inadequacy and lack of thorough research.

14. The loss of tree hollows is a listed 'Key Threatening Process' under the TSC Act and is likely to impact on a large number of threatened birds including the Brown Treecreeper, Turquoise Parrot, Barking Owl (*Ninox connivens*), Powerful Owl (*Ninox strenua*), Glossy Black Cockatoo (*Calyptorhynchus lathami*) and Gang Gang Cockatoo (*Callocephalon fimbriatum*). BirdLife maintain that the direct removal of any tree hollows should be avoided, and if

unavoidable should be offset with significantly more artificial hollows (at least 5 artificial hollows to each natural hollow removed). Artificial hollows should be mounted in woodland where natural hollow density is low (not intact remnants). A 5:1 ratio may account for the variability in nest box positioning and reduced likelihood of colonisation of such artificial habitat in comparison to the optimal natural hollow habitat that will be removed. Not only must hollows be offset at this ratio, the size classes of artificial hollows installed must reflect the size classes that occur in nature. Emphasis should be placed on the larger hollows that are rarer in the landscape and provide nesting suitable habitat for large threatened birds like Glossy Black Cockatoo and Powerful Owl, however, smaller hollows are equally important and emphasis should be placed on providing suitable nesting habitat for Turquoise Parrot and Brown Treecreeper. Hollows must be replaced every five years or earlier if the boxes are showing signs of decay.

15. The loss of coarse woody debris, 'standing and felled timber' is a listed 'Key Threatening Process 'under the TSC Act and likely to impact on a large number of threatened birds including the Brown Treecreeper, Hooded Robin, Grey-crowned Babbler, Speckled Warbler, Diamond Firetail, Scarlet Robin (*Petroica boodang*) and Flame Robin (*Petroica phoenica*). BirdLife maintain that the direct removal of any woody debris and standing timber should be avoided, and if unavoidable should be offset with more woody debris than was removed. Woody debris can be obtained from the approved clearing of standing timber associated with any approved mine clearing footprints. The end result should see the woody debris load in open grassy woodlands in all offset properties and rehabilitation areas at no less than 22-25 tonnes per hectare. This load is reflective of the loads seen in remnant open grassy woodlands. KEPCO should supply this timber from their approved operations, prepare it for spreading and scatter it across all their offset properties to reflect natural woody debris which is essential foraging, shelter and breeding habitat for the above listed woodland bird species.

16. All of the creeks mentioned in the EIS provide important water sources and habitat for the threatened woodland bird species discussed. All of these creeks are threatened with accidental mine water discharge. The number of cases of environmental spills from inadequate waste water management and poor storm water holding capacity is alarming and enough to suggest that a spill will one day occur as a result of the proposed Bylong Coal Mine. Most recent cases in several mines operated by another coal company

(Centennial Coal) in the Lithgow area provide no hope for an environmental-incident-free coal mine in the environmentally sensitive Bylong Valley.

17. Further targeted survey of all threatened woodland birds during the breeding season and non-breeding (foraging) seasons should be carried-out across the Project Application Areas, ideally using both observational survey methods and passive acoustic devices (e g. SongMeters). This will assist in establishing where birds are present and possibly breeding across the Project Application Area.

18. BirdLife do not support approval of the Bylong Coal Project, but should it be approved by Government, no vegetation clearing or associated activities should be carried-out during spring to autumn when threatened woodland birds such as Hooded Robin, Turquoise Parrot, Speckled Warbler, Grey-crowned Babbler and Brown Treecreeper nest. Pre-clearing surveys must take place prior to all clearing events as per standard due diligence procedures and should be undertaken immediately prior to clearing (a maximum of two days prior). Only Ecologists who are experienced in identifying woodland birds, their breeding behaviour and nests should be permitted to undertake such pre-clearing surveys. This does not include graduate or unskilled Ecologists and non-qualified personnel. If breeding threatened woodland birds are found, clearing must be delayed until the nesting period for that species has completed. The nesting birds should be monitored in a safe and ethical manner to ensure the project activities do not impact nesting. A buffer of at least 500m should be left between the nesting birds and any clearing or associated project operations such as earthmoving, grading etc. A nest or potential nest of a threatened woodland bird should never be felled or cleared until it is certain the bird has completed nesting.

During pre-clearing surveys, extra attention should be paid to any areas where Yellow Box, White Box, Slaty Gum, Blakely's Red Gum, Grey Gum or Rough-barked Apple occur. Extra attention should also be focused on areas of mistletoe (e.g. *Amyema* spp.) as this is a significant nesting and foraging habitat for most threatened woodland birds, as are tree hollows (for Brown Treecreeper and Turquoise Parrot) and dense shrubs and tussocks (for Speckled Warbler). Mistletoe in trees, and hollow-bearing trees should be marked with precise coordinates in a GPS device and marked with spray paint or bold tape (that will last on the tree) to delineate them as important habitat features that must only be felled in the presence of an experienced Ecologist who can inspect the habitat elements and save any injured or displaced fauna.

19. Impacts of subsidence on vegetation and bird habitat (e.g. through dieback caused by the shearing of tree roots, or alteration of tree root access to ground water) is overlooked in this report and not addressed adequately enough to provide any satisfaction that impacts will not be significant.

20. Subsidence will cause the collapse of pagoda formations, cliff lines, overhangs and other outcropping sandstone formations. This may cause direct impact to roosting Masked Owl (*Tyto novaehollandiae*) listed as Vulnerable under the TSC Act, and breeding habitat of the rare Rockwarbler (*Origma solitaria*) which is the only species of bird that is endemic to NSW.

21. BirdLife recommends that subsidence risk, offset management and rehabilitation is audited by environmental agencies that are impartial and unbiased (not employed or contracted by KEPCO). Any potential impacts upon native vegetation should be adequately documented, released to the public and addressed by KEPCO.

The cumulative impact of not only Bylong Mine, but all other mines and infrastructure works (including local council roads etc.) in the region must also be considered when assessing impact significance on these woodland birds and all other ecological issues.

22. BirdLife maintains that offsets are rarely an appropriate response to destruction of threatened species habitat. BirdLife oppose the use of 'Offsets' for impact mitigation because:

i. Offsets are mostly areas of remnant vegetation that exist prior to the impact taking place
ii. Offsetting the destruction of one area of remnant vegetation with a proximal existing area of remnant vegetation is not adequate, as this involves net vegetation and habitat loss. The area of existing remnant vegetation in the region is reduced to a smaller portion of what previously existed.
iii. Rehabilitation (active or passive) of derived native grasslands or regrowth woodland on Offset Properties is inadequate for compensating/mitigating the loss of woodland bird habitat, particularly foraging habitat of the Regent Honeyeater and Swift Parrot. Rehabilitation of this habitat is insufficient due to the length of time (multiple decades) for revegetated/rehabilitated woodlands to mature and provide any adequate foraging habitat value (e.g. large flowering trees) for these sensitive birds. Plantings in the Capertee Valley have shown to take up to

20 years or more before they provide foraging habitat for Regent Honeyeater. During the 20 year wait for foraging habitat to regenerate on Offset properties for the Bylong Project, the loss of habitat caused by the project itself could help send the Critically Endangered Regent Honeyeater and Endangered Swift Parrot to extinction.

iv. The loss of tree hollows (threatened bird nesting habitat) in the impact area cannot be offset with existing hollows in another area as this involves net loss of threatened species habitat. Rehabilitating derived grassland into woodland does not overcome this issue as the woodland takes 50-100 years to form adequate hollows. Nest boxes are a short term resolution to this problem as they are used less than natural hollows and usually decay after a minimum of 5 years. This artificial habitat is less preferable than natural hollows.

v. Offset properties never adequately offset loss of coarse woody debris. Loads must contain at least 22-25 tonnes per hectare in box-gum woodland remnants in order to provide sufficient habitat for threatened, obligate-woody debris using woodland birds like the Brown Treecreeper.

We appreciate this chance to comment on issues that we are most passionate about and we look forward to being informed of the final decisions of the Approvals Process. We are also open to provide further comment or expert opinion on any of the issues raised in this submission.

Yours sincerely,

Samantha Vine

Head of Conservation