Nature Conservation Council
The voice for nature in NSW

Attention: Stephen O'Donoghue
Major Projects
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

6 November 2015

Submission: Bylong Coal Project Development Application (DA 14/6367)

Dear Sir/Madam,

The Nature Conservation Council of NSW (**NCC**) is the peak environment organisation for New South Wales, representing 150 member organisations across the state. Together we are committed to protecting and conserving the wildlife, landscapes and natural resources of NSW.

NCC objects to the proposed Bylong Coal Project (DA 14/6367). The project involves establishing a new greenfield coal mine in the agriculturally important Bylong Valley and proposes to mine 6.5 million tonnes of coal per year (Mtpa) over 25 years from two open cut pits and a section of underground mine. The project will have significant impacts on climate, biodiversity, water, prime agricultural land, Aboriginal and European heritage and the Bylong Valley community.

Our key concerns are outlined below.

Climate Change/Greenhouse Gas Impacts of the Project

The proposed Bylong Coal Project will create significant greenhouse gas emissions, which will have subsequent climate change impacts, and on this basis alone should be refused.

It is understood that in order to prevent dangerous anthropogenic interference with the climate system, we must limit the average global surface temperature increase to 2°C (3.6°F) over the pre-industrial average.

International leaders will be meeting in Paris at the *Conference of the Parties to the United Nations Framework Convention on Climate Change* (the Paris Conference)[1] from 30 November 2015 with the aim of achieving "a new international agreement on the climate, applicable to all countries, with the aim of keeping global warming below 2 degrees C"[2].

[1] More information is available at www.cop21.gouv.fr/en/cop21-cmp11/what-cop21-cmp11
[2] Ibid

The Climate Council of Australia has stated that "for Australia to play its role in preventing a 2 degree Celsius rise in temperature requires over 90% of Australia's coal reserves to be left in the ground, unburned"[3].

International researchers from the University College of London, following extensive modelling, have come to a similar conclusion[4]. They suggest that to have at least a 50% chance of keeping global warming below 2 degrees C throughout the twenty-first century, globally a third of oil reserves, half of gas reserves and over 80% of current coal reserves should remain unused. Even with carbon capture and storage technologically and economically available (not the case at present), the report indicates that over 90% of Australian coal reserves would have to remain unburnt before 2050 to meet the 2 degrees C warming ceiling.

With this in mind, it is not in the public interest to approve new coal mines in NSW, particularly those that will contribute significant greenhouse gas emissions and have significant impacts on climate change.

The EIS underplays the significance of the greenhouse gas (GHG) emissions of this project[5]. While Scope 1 and 2 emissions in Australia over the life of the project amount to about 3.5 million tonnes of carbon dioxide equivalent emissions, this contribution is relatively small compared to the climate change impact of emissions from burning the coal at its final destination, which is likely to be South Korea. The scope 3 emissions from the use of thermal coal produced over the life of the project amount to about 202.5 million tonnes of carbon dioxide equivalent emissions[6]. Therefore, the true climate impact from allowing the Bylong project to proceed would be the addition of about 206 million tonnes of carbon dioxide equivalent emissions to the earth's atmosphere. This should be clearly stated in the text of the EIS.

In order to limit greenhouse gas emissions in the interests of keeping climate change within manageable levels, a 'business as usual' approach to approving coal mines is no longer acceptable[7].

The proposed Bylong Coal Project will create significant greenhouse gas emissions, is inconsistent with the aim of keeping global warming below 2 degrees Celsius and keeping 90% of all of Australia's coal resources in the ground. For this reason, the project should not be approved.

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[3] Climate Council of Australia (2015): *"Unburnable Carbon: Why We Need to Leave Fossil Fuels in the Ground", pp iii – iv,* www.climatecouncil.org.au

[4] C. McGlade & P Ekins *The geographical distribution of fossil fuels unused when limiting global warming to 2degrees C,* Nature, Vol. 157, 8th January 2015, pp 187-190

[5] Bylong Coal Project EIS, September 2015 – Vol 4, Appendix O, pp 99-104

[6] Ibid – Vol. 4, Appendix O, Table 12.1, p101

[7] C. McGlade & P Ekins, above no. 4

Impacts on Biodiversity

The Bylong Coal Project will have significant impacts on biodiversity, including threatened species and ecological communities. It is noted that:

- Two threatened ecological communities have been identified within the Project Disturbance Boundary and Subsidence Study Area: Hunter Valley Footslopes Slaty Gum Woodland and Box Gum Woodland and Derived Nature Grassland.

- A number of threatened flora and fauna species have been recorded in the study area, including the Spotted-tailed quoll, New Holland Mouse, Bush-tailed Rock Wallaby and Large-eared Pied Bat. Other species have the potential to occur on site or within the locality, including the Squirrel Glider, Grey-headed Flying Fox, Koala, Little Bentwing Bat and Broad-headed Snake.

- Twelve bird species listed as Vulnerable under the NSW TSC Act were recorded within the study area. Loss of suitable foraging habitat ranged from 224 ha to 749 ha, depending on the specific foraging habits of the species[8]. Several additional listed vulnerable species were not actually recorded during the surveys, but could potentially also use the foraging habitat which will be impacted by the proposal.

- The EIS does not provide adequate consideration of the impacts of the proposal on EPBC Act listed migratory bird species[9]. A number of EPBC Act listed migratory bird species were recorded at the site, including the Rainbow Bee-eater, and others were identified as potentially being impacted by the proposal, but were not recorded during site surveys[10]. There is insufficient information in the EIS to determine whether the removal of foraging habitat for these migratory species will have an impact on this species migration patterns.

The specific impacts on two of these species is highlighted below:

- <u>Spotted-tailed quoll</u>

  The spotted-tailed quoll is listed as vulnerable under NSW legislation and endangered under the EPBC Act. The quoll has been recorded in the study area. Approximately 229 ha of suitable foraging habitat will be removed by the project[11]. The quoll is especially sensitive to habitat change, as it is dependent on forests for its prey and shelter. The species disappears if 50% of the forest canopy is removed[12]. NCC believes that the removal of 229 ha of habitat as proposed may have a significant negative impact on the quoll population remaining in the Bylong Valley.

[8] Bylong Coal Project EIS, Appendix J, pp 6.30 – 6.48
[9] EPBC Act 1999 (Cth), Section 20
[10] Bylong Coal Project EIS, pp6.45 – 6.48
[11] Bylong Coal Project EIS, Vol 3, Appendix J, p 6.48
[12] Macdonald,D *"The New Encyclopedia of Mammals",* (2001) Oxford University Press, UK

- Regent Honeyeater

  The Regent Honeyeater is listed as Endangered under the EPBC Act, but it is now listed as Critically Endangered in NSW, in recognition that this bird species is on the path to extinction in NSW[13]. It was estimated at the time of assessment for critically endangered listing in 2010 that the NSW population may be fewer than 250 mature individuals.

  This rare bird species was recorded within the study area. The EIS states that approximately 229 ha of suitable foraging habitat for this species will be removed[14].

  The NSW OEH website states that one of the key activities to assist this species is "no further loss of known woodland and forest habitat throughout the range of the Regent Honeyeater"[15].

  Clearly, the Study Area for the proposed open cut element of the proposed Bylong coal mine includes known woodland and forest habitat for this species, which will be lost if the project is approved. For a bird that is critically endangered and heading for extinction, only avoidance of clearing more woodland habitat is an appropriate response. Offsets are not appropriate to 'compensate' for the removal of more core habitat for a critically endangered bird species.

Biodiversity Offsets Strategy

In order to respond to the identified impacts on biodiversity, the proponent has prepared a Biodiversity Offsets Strategy[16], in line with current NSW and Commonwealth Offsets policy.

NCC has significant concerns with the NSW Biodiversity Offsets Policy for Major Projects, and is concerned that an offsets strategy prepared in accordance with that Policy will not adequately protect biodiversity from the significant impacts of major coal mining projects[17].

In this particular instance, we do not consider that the proponent's Biodiversity Offset Strategy adequately ameliorates the significant impacts of the Bylong Coal Project on biodiversity, including threatened species and ecological communities.

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[13] NSW Scientific Committee www.environment.nsw.gov.au/determinations/regenthoneyeaterFD
[14] Bylong Coal Project EIS, Appendix J p 6.30
[15] www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10841
[16] Bylong Coal Project EIS, Vol 3, Appendix K
[17] NCC Submission to the draft NSW Biodiversity Offsets Policy for Major Projects. Available at www.nature.org.au/media/1894/140516-sb-submission-on-the-draft-framework-for-biodiversity-assessment-for-major-projects.pdf

Specifically, we note the following concerns:

- We do not believe the Biodiversity Offsets Strategy adequately satisfies Principle 3 of the NSW Biodiversity Offsets Policy for Major Projects, namely that offsets must be targeted to the biodiversity values being lost or to higher conservation priorities. The map in Figure 1.6 shows that Offset Area 4 is almost completely cleared of vegetation. The area of yellow box woodland described in Figure 45[18] is in our view over-generous in describing this as a vegetation community in the light of the amount on clearing shown in the aerial photo. Similarly, the northern and eastern portions appear to have been almost completely cleared for agriculture, and the large majority of these two portions is shown as prime agricultural land[19]. It is unclear how these areas can provide appropriate offsets to replace highly vegetated areas, even if some level of restoration is intended.

- We are concerned that limited application of the 'principle of additionality' is being used to justify offset areas that would otherwise remain intact. For example, Offset Areas 1, 2, 5, the Yarran View offset area and the southern portion of Offset Area 3[20] all contain significant areas of vegetation, as shown in Appendix X, Figure 1.6[21]. The vegetation communities are shown in Figure 45[22]. These areas have remained vegetated in spite of at least 150 years of agricultural land use. The reason is obvious from an examination of Figure 6, Appendix X[23] (the EIS Agricultural Impact Statement). The areas with remnant vegetation communities have not been cleared because they are largely Land Soils Capability Classes 6 to 8 – of little to no value for agricultural grazing. It could be argued that the retention of these areas as vegetated areas was something that was going to occur anyway, and does not provide additional biodiversity value to compensate for the land being cleared.

- The project proposes to clear approximately 229 ha of suitable foraging habitat for the Regent Honey Eater. Given that this bird is critically endangered with fewer than 250 mature individuals known to exist, we do not believe offsetting is appropriate and these impacts must be avoided for the mine to go ahead.

We have had limited capacity (both time and resources) to undertake a detailed review of the Biodiversity Offsets Strategy but it is clear from our initial consideration of the EIS that the project will have significant impacts on threatened species and ecological communities, and prime agricultural land, and that these impacts have not been adequately avoided, minimised or offset.

[18] Bylong Coal Project EIS, Vol 1, Chapter 7, p 171 (Figure 45)
[19] Ibid, Vol 3, Appendix K, Figure 1.6
[20] Bylong Coal Project EIS, Executive Summary, p 30
[21] Bylong Coal Project EIS, Vol 6, Appendix X, Figure 6
[22] Bylong Coal Project EIS, Vol 1, Chapter 7, p 171 (Figure 45)
[23] Bylong Coal Project EIS Vol 6, Appendix X, Figure 6

Impacts on Water

The Bylong Coal Project will have significant impacts on both surface water and groundwater. The alluvial aquifer system is apparently highly interconnected between surface water and groundwater, and the irrigation licences on the Bylong River have been over-allocated in the past. We understand that Kepco intends to use over 75 per cent of the annual rainfall recharge for mine-related purposes. The EIS Executive Summary claims that the water access entitlements it acquired when it purchased the properties within the disturbance area "will be greater than that which will be required to operate the Project in all worst case scenarios"[24]. Kepco also claims that no licensed bores on private land will be "significantly impacted by the project's groundwater impacts".

NCC is concerned about the accuracy of these claims, and requests that the water assessments be independently checked by the NSW Office of Water. Within the last 10 years, there was a drought period when nobody was allowed to extract water in the Bylong Valley. It is unclear whether this local knowledge is captured in the proponent's water modelling and what the mine would do under such circumstances.

The level of drawdown of the groundwater levels associated with the open cut mines is also uncertain. The text of the Executive Summary fails to provide a figure. While a figure of a maximum groundwater drawdown of 2 metres is mentioned in Executive Summary Figure 14, elsewhere in the main EIS text drawdown figures of up to 6 metres are mentioned[25]. This apparent discrepancy is further justification for the groundwater impacts of the proposal to be modelled by an independent government agency like Office of Water.

Impacts on Prime Agricultural Land

The Bylong Coal Project will fundamentally change the character of a rich, prime agricultural valley that has been farmed sustainably for 150 years, and without the imposition of a coal mine could continue to be farmed sustainably well into the future. The proposed project will disturb almost 3000 ha of prime agricultural land, and permanently destroy those areas within the open cut and emplacement areas. The proposed re-instatement of prime agricultural land is merely an ambit claim, unsupported by history or scientific evidence that restoration of the agricultural values of those lands can be adequately restored.

The EIS confirms that there are approximately 440 ha of verified Biophysical Strategic Agricultural Land (BSAL) within the Project disturbance footprint. It also notes that 700ha of mapped Equine Critical Industry Cluster (CIC) is within the Project Disturbance Boundary[26]. Members of the community could be forgiven for thinking that these areas are 'red flag' or protected areas where mining would not be approved. The idea that such large parcels of these mapped areas will be impacted directly by the project demonstrates that the Strategic Regional Land Use Planning Policy

[24] Bylong Coal Project EIS Executive Summary, p31
[25] Bylong Coal Project EIS Vol 4, Appendix M, Figure 10-19 (p 129) & Figure 10.20 (which appears to show a 10m drawdown)
[26] Bylong Coal Project EIS Executive Summary pp 47 – 50.

fails to provide absolute protections for Biophysical Strategic Agricultural Land and mapped Equine Critical Industry Clusters.

Prior to the NSW election earlier this year, NCC reported polling by Lonergan Research which found that 66 per cent of respondents wanted to see coal and gas developments banned on productive agricultural land[27].

This project will have significant impacts on productive agricultural farmland, is contrary to the public interest and should not be approved.

Environmental Impacts of Underground Mining on Bylong State Forest

NCC has particular concerns about the impact of the proposed underground mine on the Bylong State Forest, including by subsidence. In particular we note the following concerns:

- **Impacts on Cliffs**
  The project envisages longwall mining under almost the whole area of the Bylong State Forest, with 30 cliffs directly underlying the proposed longwall panels. Damage to cliff areas in the form of rock falls and 'visible mining subsidence movements' will occur, but the degree of damage is uncertain[28]. We note that the EIS indicates that "the likelihood of cliff instability is difficult to predict"[29]

  NCC maintains that the open cut component of the Bylong Coal Project cannot be approved because of the fundamental flaws in the proposed biodiversity offsets. However, if the NSW Government should see fit to approve the underground mining component of the project, the longwall panels overlain by prominent cliffs must not be mined, to avoid significant environmental damage. Figure 39 shows the detail of the longwall panels and the cliffs[30], and to avoid irreversible environmental damage, longwalls 105, 106, 107 and 109 must not be mined.

- **Impacts on the Brush-tailed Rock Wallaby**
  This species, listed as endangered or vulnerable under both the NSW TSC Act and Commonwealth EPBC Act, has been recorded within the study area. It inhabits rocky escarpments, outcrops and cliffs[31], exactly the areas which will be impacted by the underground mining underneath cliff lines as described above. There is insufficient information in the EIS to determine whether the damage to this threatened species will be significant. In the absence of scientific certainty, the precautionary principle should be triggered and the longwall mining under the cliffs described above should not be approved.

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[27] NSW Nature Conservation Council, "Our Environment, Our Future – policies for the 2015 NSW election and beyond" (2015), p 16.
[28] Bylong Coal Project EIS Executive Summary, p25 & p50
[29] Bylong Coal Project EIS Vol 1, p139
[30] Ibid, Fig, 39, p135
[31] Bylong Coal Project EIS, Vol 3, Appendix J, p 4.26

Heritage Impacts

We also note that the Bylong Coal Project will have significant impacts on Aboriginal cultural heritage significance. We note that 239 sites, including 25 regarded as being of high local or regional significance, were recorded in the study area. Of these, 144 sites have been identified at risk from mine impacts. Important European heritage, including the Catholic Church Cemetery, Upper Bylong Public School and a number of historic homesteads and farm buildings will be destroyed by the open cut mine components of the project.

Conclusion

NCC objects to the proposed Bylong Coal Project (DA 14/6367). The project will have significant impacts on climate, biodiversity, water, prime agricultural land, Aboriginal and European heritage and the Bylong Valley community. In particular, we submit that:

- The proposed Bylong Coal Project will contribute significant greenhouse gas emissions, is inconsistent with the aim of keeping global warming below 2 degrees Celcius and keeping 90 per cent of all of Australia's coal resources in the ground.

- The project will have significant impacts on threatened species and ecological communities, and these impacts do not appear to have been adequately avoided, minimised or offset.

- The project will have significant impacts on surface and ground water.

- The proposed project will disturb almost 3000 ha of prime agricultural land, and permanently destroy those areas within the open cut and emplacement areas.

- The project is also unacceptable due to impacts on cultural and European heritage and the visual ambience of the agricultural Bylong Valley.

For these reasons, the project should be refused.

Yours sincerely,

Cerin Loane
Policy and Research Coordinator