Nature Conservation Council
The voice for nature in NSW

Ecological Communities Section
Department of the Environment
GPO Box 787
Canberra ACT 2601

By email: epbc.nominations@environment.gov.au

29 October 2014

Submission on the listing of the Central Hunter Valley Eucalypt Forest and Woodland Complex as an endangered ecological community under the Commonwealth *Environment Protection and Biodiversity Conservation Act* (1999)

Dear Sir/Madam,

The Nature Conservation Council of NSW (**NCC**) is the peak environment organisation for New South Wales, representing 130 member societies across the state. Together we are committed to protecting and conserving the wildlife, landscapes and natural resources of NSW.

NCC supports the listing of the Central Hunter Valley Eucalypt Forest and Woodland Complex as an endangered ecological community under the Commonwealth *Environment Protection and Biodiversity Conservation Act* (1999) (**EPBC Act**). Our key comments on the Draft Advice and proposed nomination are outlined below.

Description of Ecological Community

NCC considers the description of the ecological community to be accurate and clear in its scope. The description of the community is based on the considered views of experts drawn together in a technical workshop to consider the nomination of the community (previously described as the 'Hunter Valley remnant woodlands/open forests').

Existing listings by the NSW Scientific Committee are referenced and it is clear which of these communities correspond to the proposed EPBC listing, with closest correspondences to the state listed threatened ecological communities *Hunter Lowland Red Gum Woodland in the Sydney Basin Bioregions* and *Central Hunter Grey Box Ironbark Grassy Woodland in the NSW North Coast and Sydney Basin Bioregions*. NCC notes that about 70% of the pre-European extent of the Central Hunter Grey Box Ironbark Woodland community has been cleared and that 60% of the Hunter Lowland Red Gum Woodland have been cleared, with most remaining remnants being small, widely scattered and subject to ongoing edge and weed impacts. [1] It is also likely that this is an under-estimate of the remaining extent of these communities, as considerable clearing of woodlands has occurred since 2006 particularly in relation to coal mine expansion.

[1] Peake, T.C. (2006) "The vegetation of the Central Hunter Valley, New South Wales. A report on the findings of the Hunter Remnant Vegetation Project". Hunter Central River Catchment Management Authority, Paterson

Characterisation of Species

We generally consider the list of key diagnostic characteristics to be accurate and based on the best available information, including comprehensive vegetation surveys across the region (including Peake (2006)). These surveys have a high degree of reliability when applied in the field.

We are concerned however with the inclusion of *E.fibrosa* (red/broad-leaved ironbark) as 'contra-indicative'. This species is known to occur in the Central Hunter in Box-ironbark communities (see Plant Community Type 1600) where there may be an intergrade between lower Hunter and central Hunter grey box/ironbark TECS, particularly around the Branxton area and is known to occur in Central Hunter Grey Box Ironbark woodland communities in the central Hunter.[2]

We have provided an update of the list of threatened species which may occur in this community (**Appendix 1**). We note that the list of fauna species in particular is considerably longer than that provided in the preliminary listing. We also note that the species *Acacia bynoeana* is not likely to occur in this woodland community, being found on nutrient poor sand and healthy woodlands, and not found on the better soils associated with this woodland.

Differentiation

Section 1.5.2 of the conservation advice is intended to clearly identify species which indicate vegetation types which fall outside the proposed listing and therefore assists with differentiation. We note however our concerns, outlined above, with the inclusion of *E.fibrosa* (red/broad-leaved ironbark) as contra-indicative.

Condition Thresholds

The condition thresholds presented in the conservation advice are appropriate given the size of remnants across the region and typical condition states of remnants.

It is important to note that it is highly unlikely that any area where there has been extensive soil disturbance (e.g. ongoing cultivation or rehabilitation areas following mining) would meet the criteria for inclusion as a stand of the listed community, but that for the most part, the Central Hunter Bull-oak dominated woodlands are a derivative and would meet the definition of this new listing given certain condition criteria are met. This is consistent with analysis provided in Peake (2006).

The proportion of native plant species in mining rehabilitation areas typically ranges between 15 and 40% of total plant species that would occur in this community. When cover is considered the proportion is much lower with the exotic ground cover species as Galenia (*Galeniapubescens*) being dominant across many of the rehabilitation areas, as well as exotic grassland species including Rhodes Grass (*Chlorisgayana*).

Current and Former Extent

As stated previously, the region has been subject to comprehensive vegetation surveys and a series of listings under the NSW *Threatened Species Conservation Act*. These processes have involved a large number of relevant experts. The estimates of current and former extent have a high degree of reliability, though may be a little out-

[2] D. Paull, NSW Office of Environment Heritage (pers. communication)

dated. NCC also notes that the total extent of this community is still unclear from the mapping provided and that areas of Cessnock LGA and the Kerrabee IBRA sub-region may be included in the determination.

Key Threats

Mining

The conservation advice understates the threats posed to the ecological community by open-cut mining. Mining is the primary threat to the ecological community in this region. While the threat is somewhat encapsulated by the threats of "industrial development" and "vegetation clearing and landscape fragmentation", its impact on the ecological community is so great, it warrants identification in the conservation advice as a threat in its own right. Mining has had and will continue to have a devastating impact on the community and once the vegetation is cleared and the topsoil stripped these areas can never be recovered to a pre-mining state. Open-cut mining has a major impact in terms of fragmentation and isolation of remnants of this community.

Exotic Species

Mining and land clearing activities have also resulted in the proliferation of exotic species, notably Galenia (*Galeniapubescens*), Rhodes Grass (*Chlorisgayana*), African Lovegrass (*Eragrostiscurvula*) and Bridal Creeper (*Asparagus asparagoides*). These activities are likely to result in future waves of invasion, with Coolatai Grass and related grasses (*Hyparrhenia* spp.) a particular threat. The level of these threats needs to be explicitly stated in the conservation advice.

Galenia and Rhodes Grass need to be discussed among the invasive flora species listed in Appendix D of the conservation advice.

Evidence of key threats

The threat of open-cut coal mining and related land clearing in the area is clear. There are a number of mines currently operating in the area, some of which are seeking approval to expand operations as well as new project applications.

By way of example, the following table outlines key proposals located in the Hunter region currently being processed by the NSW Department of Planning and Environment:

Name of Mine	Link to Department's website and project information	Current Status
Ashton Mine	Modification 5 - South East Open Cut	Recommendation Made
Bengalla Mine	Continuation Project	Assessment
Bulga Mining Complex	Bulga Open Cut Extension project	Assessment
Bylong Project	Bylong Coal Project	DGRs Issued
Liddell Mine	Modification 5 - Mine Extension	Assessment
Mount Owen Mining Complex	Mount Owen Continued Operations Project	DGRs Issued
Mt Thorley Mine	Mount Thorley Continuation Project	Proponent Reviewing Submissions
Rix's Creek Mine	Rix's Creek Extension Project	DGRs Issued
Spur Hill Underground Coal Mine	Spur Hill Underground Coal Project	DGRs Issued
Wambo Mine	Wambo Mine - Modification 12 - Southern Longwall Modifications	DGRs Issued
Warkworth Coal Mine	Warkworth Continuation Project	Proponent Reviewing Submissions

Nomination and listing

NCC supports the listing of the Central Hunter Valley Eucalypt Forest and Woodland Complex as an endangered ecological community under the Commonwealth *Environment Protection and Biodiversity Conservation Act* (1999) (EPBC Act).

We look forward to the finalisation of the Conservation Advice and the Minister's consideration of the proposal to protect this important natural area and habitat.

Yours sincerely,

Kate Smolski
Chief Executive Officer

APPENDIX 1 - List of threatened species which may occur in this community

TSC Act Status	EPBC Act status	Scientific Name	Common Name
Endangered		Acacia pendula - endangered population	Acacia pendula population in the Hunter catchment
Endangered		Cymbidium canaliculatum - endangered population	Cymbidium canaliculatum population in the Hunter Catchment
Critically Endangered	Endangered, Migratory	Anthochaeraphrygia	Regent Honeyeater
Endangered	Endangered	Lathamusdiscolor	Swift Parrot
Vulnerable		Diuris tricolor - endangered population	Pine Donkey Orchid population in the Muswellbrook LGA
Critically Endangered	Critically Endangered	Persooniapauciflora	North Rothbury Persoonia
Not Listed	Critically Endangered	Prasophyllum sp. Wybong (C.Phelps ORG 5269)	Prasophyllum sp. Wybong (C.Phelps ORG 5269)
Vulnerable		Melithreptusgularisgularis	Black-chinned Honeyeater (eastern subspecies)
Vulnerable		Climacterispicumnusvictoriae	Brown Treecreeper (eastern subspecies)
Vulnerable		Stagonopleuraguttata	Diamond Firetail
Vulnerable		Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)
Vulnerable		Melanodryascucullatacucullata	Hooded Robin (south-eastern form)
Vulnerable		Chthonicolasagittata	Speckled Warbler
Vulnerable		Daphoenosittachrysoptera	Varied Sittella
Vulnerable		Phascogale tapoatafa	Brush-tailed Phascogale
Vulnerable	Vulnerable	Phascolarctoscinereus	Koala
Vulnerable	Endangered	Dasyurusmaculatus	Spotted-tailed Quoll
Vulnerable		Petaurusnorfolcensis	Squirrel Glider
Vulnerable	Vulnerable	Thesiumaustrale	Austral Toadflax
Endangered	Endangered	Pterostylisgibbosa	Illawarra Greenhood
Vulnerable		Ninoxconnivens	Barking Owl
Vulnerable		Petroicaphoenicea	Flame Robin
Vulnerable		Ninoxstrenua	Powerful Owl
Vulnerable		Petroicaboodang	Scarlet Robin
Vulnerable		Circus assimilis	Spotted Harrier
Vulnerable	Vulnerable	Nyctophiluscorbeni	Corben's Long-eared Bat
Vulnerable		Miniopterusschreibersiioceanensis	Eastern Bentwing-bat
Vulnerable		Vespadelustroughtoni	Eastern Cave Bat
Vulnerable		Falsistrellustasmaniensis	Eastern False Pipistrelle
Vulnerable		Mormopterusnorfolkensis	Eastern Freetail-bat
Vulnerable		Scoteanaxrueppellii	Greater Broad-nosed Bat

Vulnerable	Vulnerable	Chalinolobusdwyeri	Large-eared Pied Bat
Vulnerable		Miniopterusaustralis	Little Bentwing-bat
Not Listed	Vulnerable	Pseudomysnovaehollandiae	New Holland Mouse
Vulnerable		Myotismacropus	Southern Myotis
Vulnerable		Saccolaimusflaviventris	Yellow-bellied Sheathtail-bat
Vulnerable	Vulnerable	Ozothamnustesselatus	Ozothamnustesselatus
Vulnerable		Falco subniger	Black Falcon
Vulnerable		Callocephalonfimbriatum	Gang-gang Cockatoo
Vulnerable		Calyptorhynchuslathami	Glossy Black-Cockatoo
Vulnerable		Hieraaetusmorphnoides	Little Eagle
Vulnerable		Glossopsittapusilla	Little Lorikeet
Vulnerable		Tytonovaehollandiae	Masked Owl
Vulnerable		Grantiellapicta	Painted Honeyeater
Vulnerable		Lophoictiniaisura	Square-tailed Kite
Vulnerable		Neophemapulchella	Turquoise Parrot
Vulnerable	Vulnerable	Pteropuspoliocephalus	Grey-headed Flying-fox
Vulnerable	Vulnerable	Eucalyptus glaucina	Slaty Red Gum
Vulnerable	Vulnerable	Prostantheracryptandroides subsp. cryptandroides	Wollemi Mint-bush
Vulnerable		Ancistrachnemaidenii	Ancistrachnemaidenii
Vulnerable	Vulnerable	Dichanthiumsetosum	Bluegrass
Endangered		Burhinusgrallarius	Bush Stone-curlew
Vulnerable		Certhionyxvariegatus	Pied Honeyeater
Vulnerable		Diuris tricolor	Pine Donkey Orchid
Vulnerable	Vulnerable	Rulingiaprocumbens	Rulingiaprocumbens
Vulnerable	Vulnerable	Prostantheracineolifera	Singleton Mint Bush
Endangered	Endangered	Diuris pedunculata	Small Snake Orchid