

Submission
No 215

INQUIRY INTO PROPOSAL TO RAISE THE WARRAGAMBA DAM WALL

Organisation: Cumberland Bird Observers Club Inc

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Cumberland Bird Observers Club

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9 September 2019

Mr Justin Field MLC,
Committee Chair,
Select Committee on the Proposal to Raise the Warragamba Dam Wall,
Parliament House,
Macquarie Street,
SYDNEY NSW 2000

Dear Mr Field,

Re: CBOC submission to NSW Upper House Inquiry into the Proposal to Raise the Warragamba Dam Wall

Cumberland Bird Observers Club Inc (CBOC) is a community organisation based in Sydney. We have about 360 members with a keen interest in the observation and conservation of native birds locally and nationally. We thank you for the opportunity to make a submission to this Inquiry.

CBOC considers that the proposal by the NSW Government to increase the height of the Warragamba Dam wall by 14 metres (17 metres has also been suggested) would, if carried out, cause great damage to important habitat of threatened bird species and to many other natural values. It would also contravene or ignore obligations by the State to protect the landscape, biodiversity and cultural values of lands dedicated as National Park or equivalent and (in some cases) additionally classed as World Heritage areas. Details are given below.

Government justification for raising dam wall

The NSW Government is apparently very keen to mitigate flood risk in the Hawkesbury-Nepean valley. It has stated (in correspondence to CBOC) that all options to mitigate the flood risk were carefully assessed, including raising the Warragamba Dam wall. Raising the Dam by around 14 metres was considered to be the most effective infrastructure option for reducing the regional flood risk.

CBOC does not have details of the alternative options that were rejected by the current Government, with their perceived faults; nor an explanation of the effectiveness or otherwise of the modified spillway built in about 2000 at a cost of \$100 million. We have also been informed (without detail) that two experts on flood policy and water supply are vocal critics of the dam wall raising plan, and have identified a range of alternative solutions for securing flood plain communities.

Our main reason for mentioning these matters here is to encourage the Inquiry to thoroughly investigate the merits of flood control alternatives to raising Warragamba Dam, which could avoid the considerable damage to the natural and cultural values of the area (discussed below) likely to result from the NSW Government's favoured plan.

The NSW Government has also stated: "The World Heritage areas upstream of the existing dam are already subject to flood inundation without the dam [wall] raising". The implication of this may be that the wall raising plan would not cause any more damage to streams and vegetation than did previous high rainfall events that filled the existing dam. If so, it seems illogical. If the top water level of the current dam is at x metres altitude, water must have reached this height several times during flood events in the past 4 to 5 decades, often remaining for long enough to inundate and kill vegetation and streams below x metres. In times of lower water level such as the present, the top of this "dead zone" is visible as a band or "skirt" of more-or-less bare soil between contour x and the level to which the water level has fallen (e.g. x minus 30 metres). The dead zone is (horizontally) wider where the topography is flatter.

In simple terms, raising the potential top water level from x to $(x + 14)$ or so metres of altitude would move the possible zone of inundation further uphill on land and further upstream in creeks and rivers, widening the skirt of (likely) drowned vegetation and stream habitats to varying extents.

Government publicity indicates that water would be held at extra depth (e.g. about 14 m above current top level) for "a matter of days to around two weeks". We do not know how long natural vegetation like trees can tolerate having their roots and possibly parts of their crowns under water, before they die or at least become very unhealthy. This would vary with species, size and prior health of trees. Other important components of habitat such as shrubs and grasses would obviously also be affected, possibly differently from trees. Occasional floods several years apart could be less destructive than multiple floods within the space of a few years. This latter scenario seems likely, eventually, so total or near total destruction of existing vegetation between the current top water level and the contour about 14m above this is probable after some number of years.

We are told in Government "Q and A" literature that "Comprehensive ecological studies are currently being undertaken to assess the upstream impacts of a temporary increase in upstream inundation, which will be fully documented in the Environmental Impact Statement." This EIS has not been produced yet, so probable impacts of temporary flooding on the local vegetation are unknown (publicly) at present. Hopefully, some useful predictions regarding this important topic will become available with the EIS.

Potential damage to woodland bird habitats

The predicted maximum extent of present dry land likely to be inundated by increasing the height of the Dam wall by 14 m is about 4,700 ha, including parts of two National Parks and three State Conservation Areas. A large (but not quantified) proportion of this potentially inundated land has threatened ecological communities such as White Box-Yellow Box-Blakely's Red Gum Grassy Woodland on gentler lower

slopes in the upper reaches of the Burratorang Valley. Important stands of the rare, potentially commercially valuable tree *Eucalyptus benthamii* (Camden White Gum) also grow in this area.

This vegetation is itself a remnant of ecological communities that existed before the present dam was built in the 1960s. However, it still provides a viable habitat for several rare and declining woodland birds, including:

Glossy Black-cockatoo
Turquoise Parrot
Brown Treecreeper
Speckled Warbler
Varied Sittella
Scarlet Robin
Hooded Robin
Regent Honeyeater
Dusky Woodswallow

These species have been recorded recently in this area (eBird records, September 2018 to August 2019).

The most notable recent "find" bird-wise in the area threatened with inundation has been more than 20 individuals of the Critically Endangered Regent Honeyeater (RHE - total population about 400 at most), including at least 7 breeding pairs, in summer 2017. This site is one of only a handful of known favoured RHE breeding sites in Australia. As such, BirdLife Australia considers the site to be of great conservation importance, and not able to be "replaced" by offsetting.

If the wall raising proposal goes ahead, we request that mechanisms that might prevent the flooding of at least parts of the grassy woodland habitat of the Upper Burratorang (particularly areas favoured by Regent Honeyeaters) should be investigated.

Loss of other habitat areas

The occasional flooding of many additional valley floors due to raising the dam wall, and the likely attendant death of most or all native vegetation in areas inundated, would result in the loss of much of the productive core habitat for many wildlife species (including presently common species) in the southern Blue Mountains. It is estimated that an extra 65 km of wilderness streams (with surrounding vegetation) would be affected by inundation, destroying habitats of animals such as wombats, kangaroos, wallabies, possums and smaller mammals on river and creek flats, and the habitat of platypus and a wide range of other aquatic fauna that live in the natural streams.

It cannot be expected that land animals displaced by higher floods than previously could simply move 14 metres or more higher in altitude and carry on as normal. Such a move would often place them on steep, rocky and infertile terrain or even cliff faces, where they would not be able to eke out a living.

Even if streams were only occasionally inundated, their valleys would be likely to become increasingly coated with silt from erosion and attendant increased sedimentation. This would encourage exotic weed growth of little wildlife habitat value in periods between floods.

World Heritage considerations

CBOC understands that part of the area that would be impacted by the dam raising proposal lies within the Greater Blue Mountains World Heritage Area (GBMWhA), and the rest of the affected area is in national park land outside the WHA. Regarding the GBMWhA, the NSW and Federal Governments both have a responsibility to ensure that World Heritage listed values of the area are not jeopardised. These values include threatened plant and animal species (notably the Regent Honeyeater), upper reaches of wild rivers above current top water level, Aboriginal cultural heritage sites, and scenic values. The loss of Endangered biodiversity cannot not be genuinely "offset", since much of the potential damage falls in the "severe or irreversible" category.

If the NSW Government continues to advocate the Warragamba Dam wall raising strategy, we believe there is a strong onus on the Government to clearly demonstrate that there is an undeniable need for better flood control in the Hawkesbury-Nepean floodplain of Sydney. Further, it needs to demonstrate clearly that the advocated raising of the height of the Dam wall is still considered to be the best method of achieving such control, after full evaluation of alternative infrastructure-based and management-based schemes.

Yours faithfully,

Conservation Officer,
Cumberland Bird Observers Club Inc
e-mail: