Feedback on the EIS to raise the height of Warragamba Dam

Dear Water NSW,

Thank you for the opportunity to comment on the environmental impact statement for the Warragamba Dam Raising (the EIS). I have been visiting the national parks of the Blue Mountains for over 40 years with family, friends and clubs such as the Sydney Bushwalkers and the Catholic Bushwalkers. Over this time, I have formed a close connection with the Blue Mountains, in particular the valleys of the Cox, Kowmung, Nattai and Wollondilly valleys that will be most impacted by this proposal. I do not support the raising of Warragamba Dam due to the impacts on national parks and world heritage values.

I agree that a comprehensive strategy to protect people, houses and other infrastructure in flood prone areas of the Hawkesbury Nepean needs to be developed. However, the preferred solution presented in the EIS violates three important principles:

1. heritage values in national parks and a world heritage area are treated as a 'sacrificial lamb' and can be destroyed as a consequence of unrelated land use planning decisions
2. the cost-benefit analysis in section 4 does not place a price on heritage values
3. the approval of infrastructure on floodplains by government consent authorities creates a responsibility to provide a safe urban environment in-situ

I will now deal with these principles in more detail.

The responsibility for approving urban infrastructure on the Hawkesbury Nepean floodplain lies with local and/or the NSW government. The consent role for specific developments often lies with local government. However, these planning decisions are informed by policies developed by the NSW government. If approving urban infrastructure on a floodplain, the consent authorities should recognise that additional measures such as house design and flood proof transport infrastructure will be needed to create a safe urban environment. This necessarily means that urban development of floodplains will have associated costs. The preferred outcome in this EIS attempts to reduce this cost by destroying heritage values in national parks. This is not acceptable. The flood risk on the Hawkesbury Nepean has resulted from urban land use planning decisions that were made with the knowledge that managing the flood risk would be expensive. Government has a responsibility to make the necessary investment to mitigate this risk without damaging national parks. The elements of a flood mitigation strategy could include:

1. a flood mitigation role for Warragamba Dam
2. upgraded transport/evacuation infrastructure
3. early warning of flood events
4. voluntary buy back of infrastructure on floodplains
5. housing design standards that minimise flood damage

The EIS considered lowering the full supply level of Warragamba Dam by either 5 meters or 14 meters. The former option was rejected because it only offered protection from smaller floods. The latter offered similar flood protection to the option of raising the dam wall but was considered too expensive. However, I have already made the point that additional costs will arise if urban infrastructure is approved on floodplains and that government should bear this cost because it was

the consent authority. Operating Warragamba Dam at a lower full supply level should be the preferred option to provide flood mitigation rather than raising the dam wall.

The EIS also makes the point that upgraded transport infrastructure is expensive and considers that it is less cost effective than raising the dam wall. However, this misses the point that the dam raising option reduces but does not eliminate flood risk. Hence, evacuation routes must be factored into urban planning and key transport routes in western Sydney need to remain available in flood events.

The EIS also considered the option of compulsory acquisition of flood prone houses but concluded that it was not cost effective. However, this does not address the question of voluntary acquisition where people wish to move away from flood prone areas. Some people may not have understood the ramifications of living on a floodplain when buying a house. The voluntary acquisition of flood prone properties would assist people who wish to relocate. Over time, this process would lead to a reduction of infrastructure on the floodplain. Some people will have a close attachment with their place of residence and should be permitted to stay. For this demographic, a flood mitigation strategy could include incentives to modify dwellings to reduce the likelihood of flood damage.

Finally, the Legislative Council Select Committee noted that Warragamba catchment contributed less than 60% of the flows to the flood in March 2021. This illustrates the significant contribution to major flooding in western Sydney from catchments other than Warragamba. These include the Nepean and Grose Rivers. This illustrates a significant limitation of the current proposal in so far as it relies solely on the Warragamba catchment for flood mitigation.

I would now like to comment of the heritage values that will be affected by raising the dam wall.

The Blue Mountains was inscribed as world heritage in recognition of outstanding universal value for its biodiversity and evidence of evolutionary processes. The area also has considerable cultural heritage value. Raising Warragamba Dam will damage the natural and cultural values of the Blue Mountains, which would be a clear breach of Australia's obligations under the World Heritage Convention. The EIS attempts to rationalise this damage by saying that only a small area of world heritage would be affected. This approach ignores the fact that specific values of the world heritage area would be disproportionally affected. These include:

1. National parks and world heritage areas are supposed to be places where heritage is protected in perpetuity. Treating protected areas a 'sacrificial lambs' undermines this principle.
2. The Camden White Gum population in the Kedumba valley. The EIS states that 44 hectares will be affected but does not estimate the number of individuals. The EIS does not provide an estimate of the proportion of the population that will be affected but it is likely to be substantial. This loss directly affects the world heritage values of the Greater Blue Mountains, where its eucalypt diversity is recognised as having outstanding universal value. There are no likely options to offset this impact. Camden White Gum is entirely restricted to Hawkesbury Nepean catchment. The populations along the Nepean River are mostly disturbed and not suitable for inclusion in a national park or world heritage area. Further, the populations that used to occur in the lower parts of the Burragorang valley below the current full supply level of Warragamba Dam were submerged many decades ago.

3. Riverine forests along the Cox, Kowmung, Nattai and Wollondilly rivers. Riverine forests across NSW have been heavily cleared and/or affected by weeds that readily spread along river corridors. Riverine forests that are in relatively good condition such as those of the Blue Mountains are of higher value than the more typical disturbed examples. The riverine forests affected by raising the dam wall include good examples of the River-Flat Eucalypt Forest on Coastal Floodplains, which is a critically endangered ecological community.
4. Regent Honeyeater habitat. This is a critically endangered species and its habitat along the Wollondilly River is in good condition. This is in contrast to much of the remaining Regent Honeyeater habitat which is highly fragmented or disturbed in much of the range of this species. High quality habitat is likely to be particularly important for the Regent Honeyeater that is in severe decline. The degradation associated with temporary inundation of this habitat would represent a considerable loss. Another indicator of the quality of this habitat is the presence of several other woodland birds that are listed as vulnerable. These include Speckled Warblers, Diamond Firetails, Hooded Robins, Black-chinned Honeyeaters and Brown Treecreepers.
5. Approximately 430 hectares of good condition White Box Yellow Box Blakely's Red Gum Woodland. Again, many of the remaining examples of this critically endangered ecological community are fragmented and/or disturbed.
6. A substantial number of additional endangered or vulnerable plants and animals will be affected. These are listed in chapters 8 and 13 of the EIS
7. The Kowmung River which has been declared a 'Wild River' in recognition of its pristine condition
8. Aboriginal heritage values. The discussion of Aboriginal heritage in the EIS is focussed on recorded sites. This is one element of heritage, but other aspects such as connection to country or the potential importance of landscape features such as rivers do not appear to have been addressed. This aspect of the EIS can only be adequately addressed through consultation with the relevant indigenous groups. I note that the Legislative Council Select Committee has recommended that the Warragamba Dam raising should not proceed should Registered Aboriginal Parties not give prior consent. This seems to be a sound approach.

I would also like to briefly comment on the flood modelling used to produce the impact area that forms the basis for the biodiversity assessment in the EIS. I note that the upper level of the impact area is 10.25 meters above full supply level, which is based on an average flooding scenario. The modelled inundation period scenarios include randomly selected, half wet / half dry, wet dominated and dry dominated periods. I have no specific issue with choosing an impact area based on an average flooding scenario. However, there could be circumstances where the impact area could be larger than the average impact area in the EIS. For example, a large flood in a wet period when Warragamba Dam is already at full supply level could result is temporary flooding above the average of 10.25 meters above full supply level, with impacts that are not fully addressed in the EIS.

In conclusion, I do not support the raising of Warragamba Dam because:

1. The national parks and world heritage areas that would be affected have considerable heritage values that should be protected in perpetuity.

2. There is a feasible alternative that includes operating Warragamba Dam at a lower full supply level, the provision of infrastructure and floodplain planning and management strategies.
3. The cost of operating Warragamba Dam at a lower full supply level and providing infrastructure should be recognised as a consequence of approving urban development on flood prone land.
4. The dam raising proposal may only be partially effective in preventing major flooding because it does not address flows from other catchments such as the Nepean and Grose Rivers.

Thank you for the opportunity to provide input.

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