

25 November 2021

Submission: Environmental Impact Statement for the Warragamba Dam raising project for flood mitigation

Submission

Cate Faehrmann MLC

Greens Spokesperson for the Environment and Wildlife

Thank you for the opportunity to provide feedback on this Environmental Impact Statement (EIS) for the Warragamba Dam raising project (the project). The Greens do not support the raising of the Warragamba Dam wall. This project would permanently destroy swathes of world heritage bushland, inundate hundreds of sites of indigenous heritage, and would not significantly reduce flood risk in the Hawkesbury-Nepean Valley.

The project is entirely predicated on the blind insistence of the NSW Government to allow 134,000 more residents to settle on the floodplain¹. Calculations and consultations have not been undertaken in order to identify the best approach to reducing flood risk, but rather have been framed to select the project as the most viable option in order to justify further development. This Environmental Impact Statement has been hamstrung from the outset and has not produced a viable basis from which to make a decision regarding the merit of the project.

I have outlined some of the Greens key concerns below regarding the project. I urge the Government to prioritise the protection of our environmental and Aboriginal heritage and implement alternative solutions to reducing flood risk in the Hawkesbury-Nepean Valley.

¹ Infrastructure NSW. 2017. Resilient valley, resilient communities. Hawkesbury-Nepean valley flood risk management strategy. Infrastructure NSW, Sydney

Environmental Damage

The project represents an unacceptable threat to the upstream biodiversity of the Greater Blue Mountains World Heritage Area, and would inundate 5,280 hectares of pristine bushland and habitat for our native wildlife². The area was awarded World Heritage status due to its “globally significant species and ecosystem diversity” and the fact that “a significant proportion of the Australian continent’s biodiversity occurs in the area”³. This diverse habitat supports more than 400 vertebrate taxa (of which 40 are threatened) including one third of Australia’s bird species. Many of these species rely on the waterways that are directly connected to Lake Burragorang and would face significant destruction in the face of a flood event.

Under the World Heritage Convention, the NSW Government has a responsibility to protect and conserve areas of world heritage, and ensure their presentation and transmission for future generations. This project is in direct conflict with these responsibilities as it would see significant damage caused to over 5000 hectares of this World Heritage Area and the destruction of some of the last pristine and wild waterways in NSW, including the Kowmung River.

Several threatened species and ecological communities would also face severe consequences during a flood event if the dam was raised. The critically endangered Regent Honeyeater, the Grassy Box Woodland threatened ecological community, and unique eucalyptus species diversity would all face inundation. These species require further protection and support to ensure their continued survival. The NSW Government has a responsibility to ensure these species are preserved and the inundation of large swathes of their ecosystems is clearly in conflict with this responsibility.

The impact this project would have on threatened species and upstream biodiversity is significantly understated. Guideline requirements have not been met for threatened species surveys, and expert reports have not been obtained to supplement shortfalls⁴. This means that the extent of the impact of a flooding event on threatened species cannot be fully understood from the EIS and does not form an adequate basis for decision making in terms of threatened species and biodiversity impacts.

Furthermore, plans to offset biodiversity loss are entirely insufficient. The area was designated a World Heritage Area specifically due to its unique contribution to biodiversity. Many of the species found within the 5,280 hectares under threat are found nowhere else, and this unique habitat cannot be reconstructed once it has been destroyed. Plans to offset the destruction of this area show a profound misunderstanding of the unique biodiversity and ecological value of these waterways and surrounding bushland.

² Snowy Mountains Engineering Corporation (SMEC). 2021. Environmental Impact Statement - Chapter 8: Biodiversity - Upstream. Warragamba Dam Raising. Reference no. 30012078.

³ UNESCO, <https://whc.unesco.org/en/list/917/>

⁴ Give a Dam. <https://www.giveadam.org.au/submission>

Cultural Heritage

The project also represents a significant threat to the continued preservation of sites of Aboriginal cultural heritage. 1,541 cultural heritage sites have been identified that would be inundated⁵. Furthermore, due to a lack of proper consultation with Aboriginal community stakeholders and the fact that only 27% of the impact area was assessed for Aboriginal cultural heritage, it is likely that there are many more unidentified sites at risk⁶.

The original construction of the dam represented a significant, permanent loss of many cultural sites for Gundungurra traditional custodians as well as a substantial transformation of the land which they have cared for for thousands of years. The original construction of the dam paid no heed to the important cultural links between sites of cultural heritage and connections to culture for the Gundungurra people and was incredibly traumatic for them. The raising of the dam wall and the inundation of a further 1,541 cultural sites is not supported by the Gundungurra people.

An application by the Gundungurra Aboriginal Heritage Association and other Gundungurra descendants to have their ancestral lands protected under section 90 of the National Parks and Wildlife Act as a place of special significance to Aboriginal culture is still to be determined and would also be compromised by the project.

Flood Mitigation

The evidence provided of the flood mitigation impact of the project is insufficient to justify the expected damage to the biodiversity and cultural heritage of the impact area. It is well-documented that no level of increase to the dam wall will entirely prevent flooding of the Hawkesbury-Nepean Valley. Floodwaters from other catchment areas and waterways such as the Grose River have the capacity to cause moderate to major flooding alone, which would be sufficient to flood the 5000 homes currently under the 1:100 year flood level⁷. This risk would not be reduced by the project.

There is evidence that the project has overstated the average contribution of the Warragamba catchment to floodwaters. On page 4 of the Executive Summary of the EIS, data from Infrastructure NSW finds the average contribution of the Warragamba catchment to flood events to be 71%. However data from NSW SES has estimated the contribution of the Warragamba catchment to flood events at only 55%⁸, and data from the NSW Office of Water indicates that the contribution can be as low as 42% in some instances⁹. It is concerning that there appears to have been selective data

⁵ Ibid.

⁶ Ibid.

⁷ Infrastructure NSW. 2017. Resilient valley, resilient communities. Hawkesbury-Nepean valley flood risk management strategy. Infrastructure NSW, Sydney

⁸ NSW State Emergency Service. 2015. Hawkesbury Nepean Flood Plan. NSW State Emergency Service, Wollongong.

⁹ NSW Office of Water. 2014. Hawkesbury-Nepean Valley Flood Management Review Stage 1 Final Report. NSW Office of Water, Sydney.

used to overstate the impact of Warragamba catchment waters to flood events and therefore overstate the potential benefit of the project in flood events.

The assessment methods used to identify the project as the most effective method to reduce flood risk in the Hawkesbury-Nepean Valley are also insufficient. A very narrow economic assessment has been used which does not take into account secondary benefits of alternative projects. For example, when considering the cost and benefit of upgrading local roads, the benefit to local communities of improved road infrastructure outside of flood events was not taken into consideration. There was also no calculation of the benefit of preserving upstream ecosystems and biodiversity when considering alternative options.

With the increased frequency and intensity of major weather events and natural disasters due to climate change, there is also no way to be certain that the project will be able to contain floodwaters from the Warragamba catchment area in all scenarios. The Wivenhoe Dam in Queensland was kept half full in order to provide 1,450 billion litres of flood mitigation airspace, as the Warragamba Dam would be managed if the project is enacted. In January 2011, the dam reached capacity and subsequent water which was released from the dam was ruled as the “principal immediate cause” of extensive damage by the Insurance Council of Australia to Brisbane and surrounding areas¹⁰. The project would only allow for a finite limit of flood mitigation, and once that capacity is reached any flood-mitigation impact of the project would be entirely negated.

Alternatives

There are a number of alternative options to the project that provide flood-risk mitigation in the Hawkesbury-Nepean Valley at less cost to upstream ecology and cultural heritage. Such alternative options also do not open the door for increased development on the flood plain.

Firstly, by increasing the use of current and future desalination plants, the full storage level of the dam could be reduced to provide flood mitigation airspace. Such a project would dually serve to increase the water security of Greater Sydney through increased investment in desalination operations, and would provide the same level of flood risk mitigation as the current project, without the cost of raising the dam wall and its unacceptable impacts.

There is also serious merit in reshaping the way in which existing floodplain communities utilise flood-prone land. It is imperative that no new development is allowed in areas with high flood risk for the obvious benefit of keeping the community safe in flood events. Beyond this, implementing graduated planning controls would allow less vital infrastructure to be constructed in high risk areas. The below diagram illustrates how the impact and damage associated with flood events can be mitigated through considered use of high flood risk land.

¹⁰ Insurance Council of Australia. 2011. Flooding in the Brisbane River Catchment January 2011. Insurance Council of Australia, Sydney.

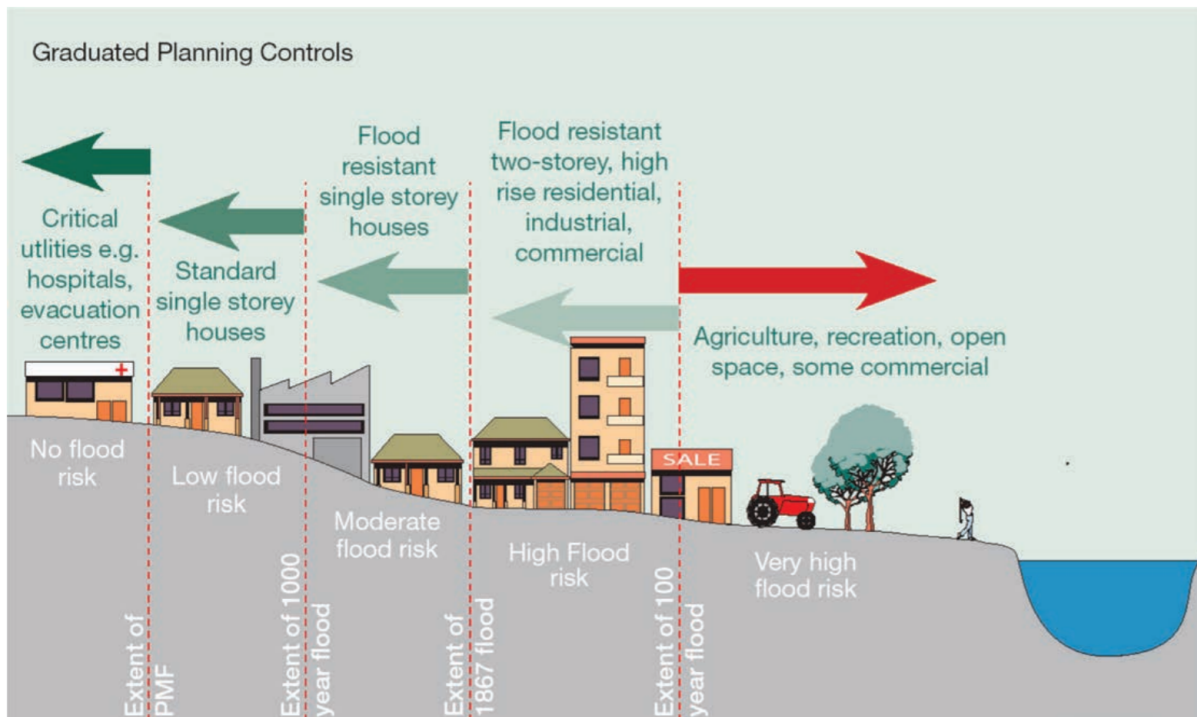


Figure 1. Hawkesbury-Nepean Floodplain Management Steering Committee (HNFMSC), 2006. Managing flood risk through planning opportunities: guidance on land use planning in flood prone areas. HawkesburyNepean Floodplain Management Steering Committee. HNFMSC, Parramatta.

Another viable alternative is increasing and upgrading flood evacuation routes. Effective evacuation has been found to be the only measure that guarantees a reduced risk to life by Infrastructure NSW. Continual development and inadequate maintenance means that more pressure than ever is being placed on existing evacuation routes in the Hawkesbury-Nepean Valley. A coordinated program to upgrade and supplement these routes would see a direct decrease in risk to life during flood events.

Relocating residents and infrastructure most at risk during a flood event would also decrease the risk to life and potential damages. Removing the 5000 homes currently under the 1:100 year flood level would significantly reduce the risk to life in flood events, and would also open up land for more low flood risk activity, such as agriculture, recreation and increased open community space.

These options are wholly viable alternatives for reducing the flood risk to life and property in the Hawkesbury-Nepean Valley, and most importantly they do not require the sacrifice of over 5000 ha of world heritage bushland and over 1000 sites of Aboriginal cultural heritage.

Yours sincerely

Cate Faehrmann MLC
Greens NSW spokesperson for Environment and Water