



Blue Mountains Conservation Society Inc

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Nature Conservation Saves for Tomorrow

Major Projects Team
Warragamba Dam Raising Proposal
Department of Planning, Industry and Environment
Locked Bag 5022
Parramatta NSW 2124

19 December 2021

Dear Sir/Madam,

Objection to the proposed raising of the Warragamba Dam wall (SSI-8441)

The Blue Mountains Conservation Society (the Society) is a community-based volunteer organisation established in 1961 that now has over 900 members. The goal of the Society is to promote nature conservation in the Greater Blue Mountains region; predominantly the World Heritage Area and surrounding lands.

The Society objects to the raising of the Warragamba Dam wall by 14 metres because if this proposal were built it would damage World Heritage listed national parks in the southern Blue Mountains and permit further inappropriate urban expansion on the Hawkesbury-Nepean floodplain placing more people at risk. These project outcomes more than cancel the potential downstream flood mitigation benefit of raising the dam wall.

The Society also believes the Environmental Impact Statement (EIS) for the proposal is defective as this report has exaggerated the proposed benefits and understated the costs arising from raising the dam wall 14 metres.

The southern Blue Mountains is one of the best managed national park areas in Australia as its Warragamba Special Area catchment designation allows for additional resources to be allocated for conservation management, such as pest control. If this proposal is approved, the efforts of generations of rangers and conservationists working to protect the southern Blue Mountains will be compromised and park values destroyed.

If approved, this proposal will cause temporary upstream inundation that results in irreversible damage to threatened species, wild rivers, and risk international censure due to the damage caused to the Greater Blue Mountains World Heritage Area.

In 2020 the International Union for Conservation of Nature rated the Greater Blue Mountains as being of "significant concern", with the raising of the height of the dam being among the list of potential "high threats". The UN's Educational, Scientific and Cultural Organisation

(UNESCO) arm said in 2019 that it was "concerning" various reports had confirmed the raising of the wall would result in "increased frequency and extent" of temporary inundation in the area. "Such inundation of any areas within the [Blue Mountains] property is likely to impact on its outstanding universal value (OUV)," it said.

If this dam proposal were built, then it is likely that the Greater Blue Mountains would be struck off the World Heritage list of properties due to the severe damage caused by the proposed raising of the Warragamba Dam wall. Regional tourism would be affected by this delisting. The Blue Mountains National Park, the most visited national park in NSW with 8.4 million visits in 2018, would no longer be as popular a national park. The World Heritage cache is a significant selling point for the Blue Mountains overseas and delisting would have economic consequences as high spending international visitors would seek World Heritage experiences elsewhere.

Potential upstream impacts understated

Approximately 65 kilometres of wilderness rivers and 5,700 hectares of National Parks and reserves, including 1,300 hectares within the Greater Blue Mountains World Heritage Area, would be temporarily inundated if the dam wall is raised 14 metres.

Yet the EIS omits almost half the potential impact area. The EIS dismisses potential impacts by considering the impacts associated with only 7.5 metres of the proposed 14 metre dam wall raising. The compensation required for the areas omitted by the EIS report, including areas nearest the full supply level, would cost hundreds of millions of dollars.

The EIS has incorrectly assumed that upstream areas currently flooded due to the existing water supply dam would be unaffected by future flood mitigation operations of the proposed raised dam. The omitted areas will be the most affected by the proposed dam wall raising because these areas will be subject to the longest periods of inundation most frequently. These most damaged areas are nearest the full supply level.

The areas nearest the full supply level support several examples of healthy, box-gum woodland ecosystems that are home to the critically endangered Regent Honeyeater. These healthy woodland ecosystems are not adapted to flooding and will die if subjected to long periods of flood inundation. The box-gum woodland ecosystems represent a small fraction of the Greater Blue Mountains World Heritage Area but they protect over half the habitat for most threatened woodland fauna species of the property.

The potential upstream impacts are further understated in the EIS because the survey efforts for cultural heritage and for flora and fauna did not adequately sample these impacted values. The under sampling during the survey has caused the range, abundance and significance of heritage values to be understated. These survey deficiencies were not subsequently made good by obtaining the appropriate expert statements on the potential impact of the flood mitigation dam on cultural, flora and fauna values.

The importance of wilderness in the southern Blue Mountains is also understated in the EIS report. In a few sentences the EIS report concludes that damage to wilderness does not require a Ministerial approval and, apparently on that basis, concludes that no further assessment is necessary. No attempt is made to determine the impact of the proposal on wild river values. No surveys were undertaken on the Kowmung River.

The Society, working with other conservation organisations, has worked for decades to protect the Kanangra-Boyd wilderness. This wilderness, the Nattai wilderness and the wild

rivers in them, are major values of the World Heritage property and one of the best-loved bushwalking areas in NSW. The southern Blue Mountains national parks have protected until now and the introduction of this proposal, areas of high ecological integrity. The wilderness has functional ecosystems supporting predators, box-gum woodlands, grazing macropods, platypus, frogs, microbats and river oak forests.

The EIS is defective because it fails to adequately consider these two wilderness areas and the impacts of the proposal on its values, such as damage to ecological integrity, wild rivers and scenery.

Cultural impacts understated

The proposed dam wall raising will not just flood specific cultural sites (there's well over the 1541 sites identified) but also destroy Gundungurra dreaming trails and stories. The southern Blue Mountains is an extensive and rich cultural landscape belonging to the Gundungurra People. The Burratorang Valley holds great significance for local indigenous organisations and people as a cultural landscape which embodies traditional stories and beliefs long held up until today.

This amazing living legacy of indigenous culture should be preserved and protected. Indigenous culture in Australia is significant, and is known at an international level to be the longest continuous culture in the world. The specified area must be physically protected so that it can be understood and passed on to future generations in a traditional and culturally appropriate way.

The proposed 14 metre dam wall raising will cause the Gundungurra traditional owners to suffer cultural dispossession for a third time. Many Gundungurra families resided in the Burratorang Valley and were dispossessed of their ancestral homes to make way for Warragamba Dam. These families found refuge in The Gully, which forms the headwaters of the Kedumba River in Katoomba. The Gully was then dammed to make a swimming pool. In 1957 a racetrack was built in the Gully that forced a second dispossession on the Gundungurra.

The Federal Government's Department of Environment and the International Council on Monuments and Sites (ICOMOS) have strongly criticised the cultural assessment and the lack of meaningful consultation with Gundungurra community members. The proposed raising of the Warragamba Dam wall would again dispossess the Gundungurra of their culture and stories demonstrating an on-going disregard for this community and its culture.

Potential downstream benefits are overstated

Any downstream benefits of the proposal would be eroded by further urbanisation of the floodplain. The projected doubling of urban precincts on the floodplain will place many more people at risk. The NSW Government has identified future housing for 134,000 people on the floodplain (Hawkesbury-Nepean Floodplain Management Steering Committee, 2007). This floodplain urbanisation is contingent on the proposal to raise the dam wall being approved.

Any reduction in flood risk to the floodplain community from the proposed dam wall raising project would be cancelled out by the intended placement of more than twice as many people at risk on the floodplain. Despite this proposal, these future residents would still be at risk of flooding.

The floodwaters that emerge from the Cordeaux, Cataract, Avon, Nepean, Grose, Macdonald and Colo Rivers, as well as from South Creek, will not be regulated by this flood mitigation proposal. These flows from other catchments would continue to cause significant flooding events on the Hawkesbury-Nepean floodplain even if the dam wall were raised. Since 1960, the contribution of the Warragamba catchment to major flooding events has ranged from 73% to 42% (NSW SES 2015, page 13). Providing flood mitigation by temporarily storing flood water behind Warragamba Dam over the World Heritage Area can only address half the floods.

Further, the Colo River during flood injects a large flow into the Hawkesbury River at Lower Portland. These flows can cause backup flooding along the Hawkesbury River and slow the drainage of any upstream floodwaters from the primary floodplain around Richmond and Windsor. Floods coming down the Macdonald-Colo rivers act as a plug in the Sackville Gorge allowing upstream flooding (NSW SES 2015, page 19). The “plug in the bathtub of the floodplain effect” is not addressed by raising the proposed raising of the Warragamba dam wall.

Also, the additional people on the floodplain would be unable to escape future floods without a significantly greater investment in high-elevation flood evacuation roads. The actual cost of further urban development of the Hawkesbury-Nepean floodplain would be greater than in areas that are not flood prone because of the additional costs to manage flood risk, such as expensive high-elevation flood evacuation roads.

A third circumstance that the proposed 14 metre dam wall raising will not mitigate is floods larger than a 1:250 year frequency flood.

Whether this proposal is built or not, the three flood behaviours described above will require additional flood management techniques to be adequately resourced to keep people safe. These behaviours all point to the necessity of preventing further urban development on the Hawkesbury-Nepean floodplain.

The proposal if built will also create a false sense of security, as illustrated by the intention to permit on-going urban expansion on the floodplain, as experienced on the Brisbane River floodplain. Like this proposal for Warragamba Dam, the flood mitigation capabilities of the Wivenhoe Dam only controls half of the flood flows in the Brisbane River. Yet despite this limited capacity, the Brisbane River floodplain was urbanised and in 2011 a major flood caused hundreds of millions dollars in damages to urban growth areas.

The operators of Wivenhoe Dam have been required to pay the victims of the 2011 Brisbane floods \$440 million in compensation from a class action against the Queensland government and Sunwater, in a partial settlement over the operation of the Wivenhoe Dam, north-west of Brisbane (Rachel Riga, ABC News, 26 February, 2021). This is the cost of assuming urban development of a floodplain can be made safe by a flood mitigation dam that mitigates half of the floods.

The risk of litigation from the operation of the proposed new dam is sufficiently great that the NSW Government is considering legislation to prevent floodplain residents from undertaking a class action like that undertaken against the Wivenhoe dam operation. Surely this is a most telling indictment of this proposal’s potential failure and risk.

Better alternatives

The Hawkesbury-Nepean floodplain is unsuitable for urban development. Instead, the flood planning level should be raised to at least 1:250 to prevent future floodplain development.

The existing dam's full supply level should be lowered to permit part of the existing capacity to be used for flood mitigation of minor, common floods. To fill the supply security gap, supply could be augmented by water reuse and desalination capacity.

Properties most at risk of flooding should be purchased and flood escape routes for existing urban development on the floodplain enhanced.

Such an integrated water management approach could be delivered at less cost than raising the existing dam wall by 14 metres because it would more efficiently utilise the water resource infrastructure.

These measures, when combined with an on-going flood awareness campaign for the community and adequate funding of NSW State Emergency Services, would protect life and property more effectively than the planned mitigation dam and floodplain urbanisation.

Thank you for the opportunity to comment.

Yours faithfully,



Tara Cameron
President
Blue Mountains Conservation Society Inc

References

Andrea Turner, et. al., The potential role of desalination in managing flood risks from dam overflows: the case of Sydney, Australia, in Journal of Cleaner Production 135 (2016) 342-355.

<https://www.ses.nsw.gov.au/media/1627/plan-hawkesbury-nepean-flood-plan-sept-2015-endorsed.pdf>

Hawkesbury-Nepean Floodplain Management Steering Committee, 2007, Hawkesbury-Nepean Valley Flood Risk Management Strategy.