

To whom it may concern,

Waragamba Dam Preferred Infrastructure Report

12/12/22

I object to the proposed raising of the Warragamba Dam wall and associated actions.

I do not consider the Preferred Infrastructure Report and accompanying Response to Submissions Report justify this extremely expensive and environmentally destructive development.

The proposal at best will only mitigate some of the flooding; a more effective, and less damaging suite of measures should be instigated, including an embargo on further floodplain residential development.

I reiterate the points made in my submission to the EIS (appended 1).

I do not consider the responses to submissions to that EIS and proposed minor amendments to the proposal meet the concerns expressed by myself and many others, including Submission 362 by Dr Chas. Keys highlighting the "levee paradox".

Publication of many other reports and statements make it clear that the raising of the Warragamba Dam Wall should not proceed. These publications range from authoritative international reports relating to climate change and biodiversity loss, to specific local comment focussing on Warragamba. I cite two examples.

Firstly, only last week the Secretary General of the United Nations reiterated his call to stop the war on nature, a point previously made in his forward to the UNEP 2021 publication *Making Peace with Nature*. This comment is directly relevant in that raising the dam wall has significant implications for the World Heritage Listed catchment upstream: suggestions of WHO boundary adjustment to evade this on a technicality is downright outrageous.

Secondly, in October Tone Wheeler, the principal architect at Environa Studio, an adjunct professor at UNSW and president of the Australian Architecture Association wrote in the Guardian that *"Raising Warragamba Dam probably can't stop floods. There's a simpler. solution close to hand"*.(appended 2)

(originally published in Architecture and Design magazine; subsequently in The Guardian Mon 31 Oct 2022 and modified on Mon 7 Nov 22)

To Conclude:

I re-affirm my objection to the PIReport on raising the Warragamba Dam Wall and associated action on the basis that it is a costly, environmentally and culturally damaging construction and that the proposal fails to resolve the issue of extreme event flooding impacts on poorly planned and located floodplain development in the Hawkesbury-Nepean valley.

Appended (1):

My submission to the Warragamba Dam Wall Draft Environmental Impact Statement,

I submit that the Warragamba Dam Wall Raising project should be rejected.

I make this statement on the basis that it. will:

- cause irreparable damage to the upstream world heritage listed environment
- cost a vast amount of taxpayer's money
- fail to fully mitigate downstream flooding events while leading to a false sense of security for downstream communities.

In making this statement I draw on over fifty years of involvement in public interest issues, including as an elected local government member and participation in government and non-government organisations concerned with natural resource management and nature conservation. My comments are also informed by the many soundly researched critiques of the EIS currently on exhibition.

Permanent infrastructure development for housing and commerce on flood-prone lands is inevitably challenging, and becoming more so as climate change delivers more extreme weather events. Some 40 years ago, while wrestling with a local flood-prone development proposal in my council area, I was told of suppressed information on flooding risks for greenfield residential expansion in the Hawkesbury region below Warragamba which nevertheless was approved by politicians reportedly keen to help their 'mates' cash in on their properties. History is coming back to bite us, as we face increasing costs, financial and environmental, due to poor decisions of the past.

The 2016 NSW Government decision, arising from the Hawkesbury-Nepean Valley Flood Management Taskforce, to 'reduce flood risk to life, property and social amenity from regional floods in the Hawkesbury-Nepean Valley now and in the future' was commendable but far too narrow. The current EIS for the Warragamba Dam Wall Raising project is even narrower, focussing on just one of the Taskforce outcomes.

The Environmental Impact Assessment (EIA) process was first developed as a way to openly and transparently 'look before you leap' prior to embarking on projects affecting the environment. An important element was to consider alternatives including a 'nogo' option with public opportunity to question and contribute to evaluation. Done properly, an EIS is an invaluable tool. Sadly all too often the EIA process has been relegated to a place-based tick-the-box exercise groomed to provide justification for a development project; the EIS for the Warragamba Dam Wall Raising project appears to fall into this category.

A rethink is needed. The EIS process needs an overhaul.

Flood management and mitigation, important as it is, should be addressed as just one aspect of good governance that cares for country so underpinning sustainable wellbeing for all.

I reiterate that the EIS for the Warragamba Dam Wall Raising is inadequate and that the project should be withdrawn.

Appended (2)

Raising Warragamba Dam probably can't stop floods. There's a simpler solution closer to home

Rain is everywhere, like sunshine on solar panels. Why not collect and use it locally, leaving the existing dam for flood mitigation?

Warragamba Dam overflowing in November last year. We need to price water in a way that encourages everyone to minimise their use of dam storages. Photograph: Dan Himbrechts/AAP

Warragamba Dam was built in 1960 to hold water from the Dyarubbin (Nepean-Hawkesbury River) as a water supply for [Sydney](#). It also had some flood-mitigation potential, to hold back water when it wasn't full.

During droughts when the dam had “too little water”, a desalination plant was built at Botany Bay. Now, when it has “too much water” in floods, there is a push to raise the dam wall to increase its volume. The New South Wales premier has [declared he will build it](#), with or without federal funding.

There are several downsides to this proposal.

First, it's hideously expensive. The current cost estimate is \$1.6bn. That could pay for a lot of social housing in western Sydney.

Second, it will [drown a vast area of ecological and Indigenous importance](#) along the river, adding to the damage the dam has already done.

[Warragamba Dam: what's driving the NSW government's bid to raise the wall?](#)

Third, and worst of all, it's highly doubtful that it could have a significant effect on flood mitigation – this needs to be managed very differently.

Which raises the question: why don't we use the dam for flood mitigation as it is, by lowering its water level now? We could use the dam in the same way that the “wall-raisers” suggest, only with better management and at far less cost.

That would require making do with far less water storage for Sydney. Can we take away a substantial part of the dam's role as a water supply and lower its regular height, so that it can perform the flood mitigation role?

The answer is yes – but it requires a different way of thinking about water supply.

Water is a widely distributed resource. Rain is everywhere, like sunshine on solar panels. It falls, often heavily, all over Sydney, and can be trapped locally on a house-by-house basis in tanks. Collecting it from a wide area, aggregating it into a single dam to store it and then distributing back out to the city is a nonsense in terms of physics and economics.

Using rainwater to substitute for the loss of dam water requires two things: encouraging the greater use of tank water, and pricing water to encourage everyone to minimise the use of dam water.

More than half (55%) of the water in a house goes to non-potable uses – toilets, laundry and external (for example, gardens and car washing). Rainwater from a tank could be used instead.

How to incentivise residents to swap? Well, water's too cheap. We need a pricing policy that increases the cost with the amount used.

A house could have 50% of its current average usage at low cost. More than that would be charged at a much higher rate, encouraging the use of alternative sources of water. A pricing policy is a far better way to encourage sensible use than the latest approach in Los Angeles, which is [fitting flow restrictors](#) to celebrity mansions.

Most Sydney houses are freestanding homes but there would need to be carve-outs for how we define a single dwelling, and exemptions for apartments – which are already substantially more sustainable. Profligate users would pay their way, with the excess money set aside for times when the desalination plant (using high-energy reverse osmosis) is needed. It is, after all, “[bottled electricity](#)”, to cite the former premier Bob Carr’s memorable phrase.

[NSW government document changed to make impacts of raising Warragamba Dam wall ‘less definite’](#)

We know that 18 years of NSW Building Sustainability Index requirements have led to rainwater storage tanks being installed in almost every new individual dwelling, with a consequent reduction in mains water consumption. We also know that many tanks are permanently full and lying idle, with the water becoming a liability, not an asset.

We need to ensure that all households that can have, or want to have, a tank have one; and we need an education campaign to ensure their optimal use. This is where we should direct a small portion of the “dam-raising moneys” – so every suburban house has an appropriate-sized tank, say 2,000 to 10,000 litres, which is used safely for all the purposes that do not need drinking water: toilets, washing machines and hoses.

The NSW government could then turn the remaining savings into relocating residents hit hardest by the floods and urgently building evacuation roads in western Sydney for those remaining.

Damn dam. Win win.

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