

This is a submission on the Environmental Impact Statement for the raising of Warragamba Dam Wall by Elizabeth Dudley-Bestow. Written December 2021.

INTRODUCTION

First, thank you for the opportunity to comment. I acknowledge that the Environmental Impact Statement (EIS) is a significant body of work with input from a range of experts and disciplines.

Overall I support all the flood risk mitigation proposals with the exception of the raising of Warragamba Dam wall. I do not agree with the EIS risk benefit analysis related to raising the wall. My objections are outlined below in two sections; one regards the upstream analysis of damage and one on the failure to consider alternative landuse possibilities downstream.

UPSTREAM DAMAGE

I have a particular appreciation of the natural area values of the dam catchment area as I have lived in the Blue Mountains for a large part of my life. I see the area often, bushwalk in nearby areas that are supported by the size of the habitat available, appreciate the signs I come across of long term Aboriginal occupation of the land and feel a deep connection myself with the natural values of the area.

Chapter 15 on Flooding and Hydrology, while I have confidence in the technical modelling on flood peaks and durations, I have much less confidence in dam managers to ensure that the asserted 100 gigalitres a day will be discharged during flood events.

Dam managers will be subject to political and community pressure. 100 gigalitres a day of discharge is still 'nuisance flooding' and it would be worse than that if it occurred while other rivers such as the Grose were all in flood. It is not at all unusual for the other local rivers and creeks to rise at the same time as the waters of Warragamba. The pressure to discharge at a lower rate will be intense. There are many historical precedents, from other areas, of dam managers responding to such pressure.

From slower discharge rates three things arise:

1. longer inundation periods than indicated by the modelling;
2. larger flood peaks than indicated by the modelling; and
3. a risk that, with inadequate rain predictions, there will be a need to discharge at greater than 100 gigalitres a day at short notice - an unmanaged flood where people thought they were safe.

For these reasons I believe that the upstream impacts are underestimated and that the flood mitigation value is over estimated.

Chapter 17 on Non-Aboriginal heritage fails to pick up some significant cultural values, and thus fails to note the impact on them. I understand that the method used drew on existing listings only and appreciate that a full cultural values study was a task beyond the scope of an EIS. However the heritage listing process is not a systematic evaluation process but relies on people to put forward items for listing. This results in the listings having a focus on items - material objects - as the lists of non-Aboriginal heritage items shows.

The NSW Heritage Act assessment criteria however is equally strongly focussed on places of stories and places of association with events and cultural identity. The area of the Blue Mountains proposed for periodic inundation is place of non-Aboriginal cultural values relating to people, events and of cultural meaning, which would be damaged by that inundation.

The cultural values are as follows;

- a share, perceived by a portion of the community, of the Aboriginal culture that arises from a respect of Aboriginal culture and its resilience. This is together with the assertion by both Aboriginal and non-Aboriginal people, that Aboriginal culture is part of the culture of all Australians;
- It is considered the birthplace of the conservation movement in Australia, being associated with Myles Dunphy, the Colong Foundation, and many environmental campaigns;
- It is a representative example of 'the bush'. Call it world heritage, wilderness, habitat or whatever, the concept of retained large undisturbed areas is loved and valued; world wide; by many Australians as part of their concept of Australia; and by Blue Mountains residents as being an integral part of the local identity.

All these values would be degraded by the physical damage arising from periodic flooding.

Chapter 18 on Aboriginal Cultural heritage fails to consider the cumulative impact of the proposal. Cumulative impact is required to be addressed as outlined in the Secretary's Environmental Assessment Requirements. The proposed losses of cultural heritage sites arising from proposed inundation are not stand alone. Such losses would come on top of significant losses when the dam was originally built, and other developments. The modelling developed for the study could easily be used to estimate the number of sites already lost. Failure to address the of cumulative loss means the conclusions of chapter 18 are invalid. The impact is more than described.

Chapter 25 on Visual Amenity uses a flawed assessment technique which results in an underestimation of the visual impact. My comments relate specifically to the upstream area.

The technique uses two well established criteria - sensitivity and magnitude – as tools to assess the visual impact. However, by using only two lookouts - albeit very high use lookouts - to assess the upstream visual impact and then implying that the impact from two sites is the same as the total impact is flawed. The fact that the visual impact would be seen from multiple views is a cumulative impact not fixed impact.

The assessment assumes that the impact of inundation scarring is a minor increase on the existing inundation scarring. It fails to take into account the increased visibility of the impacts; that the visual impact of increased inundation scars would be seen from more sites with the proposal than without. It is not the just the same scar line showing thicker – it is a much more extensive line. To my understanding this includes becoming visible from Echo Point from where the dam is not currently visible.

The assessment also fails to fully articulate the sensitivity to change both visually and culturally.

Visually; while I agree that the visual impact could be considered to take up only a small percentage of a view the inundation damaged areas are, as the report notes, high contrast in colour and texture to the rest of the view and therefore draw the eye disproportionately.

Culturally; Although the introduction to the assessment method mentions the need to assess the cultural sensitivity of the landscapes, the description of the landscape character fails to note the cultural values of the views and long vistas such as across the Jamison and Kedumba Valleys. This is important because just as ‘beauty is in the eye of the beholder’, so too is visual impact.

The cultural values of views from Echo Point, Sublime Point and many other lookouts across the Mountains derive in part from the length of time they have been part of the tourism story, giving them a heritage value. A more important value is the value (as described under the section on Chapter 17) that so many viewers place on the view, not just because it is big and dramatic, but because it is a vista 'natural bush' or 'wilderness'. The concept of retained large undisturbed areas is loved and valued; world wide; by many Australians as part of their concept of Australia; and by Blue Mountains residents as being an integral part of the local identity.

This cultural value of undisturbed bushland means that the visual impact is exacerbated by the knowledge that the flood inundation is damage occurring to an otherwise natural vista. Knowing the nature of the visual impact increases the public’s sensitivity to it.

Based on the above I would assert that the visual impact on the upstream areas resulting from occasional inundation is high, not moderate as the assessment indicates.

DOWNSTREAM CONSIDERATIONS OF APPROPRIATE LANDUSE PLANNING

As a landscape planner (Master of Landscape Planning UNSW 1994) I have spent a large part of my professional life considering appropriate uses for different landscapes. I am deeply distressed at the poor overall consideration of best possible landuses of the floodplain within the EIS.

The EIS notes that the proposed raising of the wall will result in an approximate 70% reduction in flooding – so it would still be a flood plain. The EIS does not appropriately consider alternative proposals as required by the Secretary's Environmental Assessment Requirements. If uses other than residential development are considered, then the risks arising from the floods will be reduced. Flood risk can be reduced through alternative landuse of the floodplain rather than through holding more water back.

Flood plains are very good for some types of landuse. They are good for food (and turf) production due to their landform, soils and proximity of water. The benefits of locally produced food have been documented extensively so I won't detail them here. I will however point out that the value of local food will only go up as the population of Sydney expands and the pressure to reduce the carbon costs of transport and refrigeration increases.

Flood plains are also good for open space and recreation. The river at the centre makes them especially attractive. Such land use is relatively lightly impacted by flooding; it is more resilient; less damage and costs result from flooding.

Flood plains are good for adjacent residential areas and the local governments and state agencies that have to manage them. Having a large area permanently dedicated to greenspace allows different landuses on the periphery. There are multiple examples across Australia of smaller house lots and multi-dwelling developments occurring close to dedicated open space. More dense development is easier and more efficient for local and state government agencies to provide and manage services and facilities. There are more people and rates per kilometre of road, gas main, sewer pipe; more rates to cover open space management costs.

Greater social capital arises from the more frequent interaction of people.

Again, carbon reduction benefits arise from landuse densities that support active transport.

The additional residences needed by the Sydney region can be met below Warragamba Dam. While not providing a quarter acre private parcel for each family unit, a smaller parcel with large nearby compensatory flood plain open space can be provided.

Flood plains are not good for residential homes. It may appear superficially to be the case because the land is open and gently sloping, but it floods. Floods kill people and cause millions of dollars of damage to houses. How is that desirable?

The suggestion that Warragamba Dam would allow a desirable landuse to occur is not substantiated in any way by the EIS or by any principle of good landuse planning.

To summarise, I believe that:

1. the upstream impacts raising the dam wall have been underestimated;
2. the flood mitigation benefits have been overestimated;
3. all the other risk management proposals should be implemented and extended in scope and funding; and
4. that a serious review of the best landuse of the floodplain, and the best form of additional housing for the expanding Sydney needs should occur.

Thank you for taking the time to read my submission.