



## Floodplain Management Australia

Supporting Wise Planning and Development  
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Warragamba Dam Assessment Team  
Planning and Assessment  
Department of Planning, Industry and Environment  
Locked Bag 5022  
PARRAMATTA NSW 2124  
(Submitted on line)

Dear Assessment Team

### **Submission – Warragamba Dam Raising Project – SSI-8441**

Thank you for the opportunity to comment on the proposed Warragamba Dam Raising Project. Floodplain Management Australia (FMA) strongly supports the proposal in principle, subject to implementation of appropriate land use planning controls, as detailed in this submission.

### **About Floodplain Management Australia**

Floodplain Management Australia (FMA) is the peak national body for flood risk practitioners in Australia. FMA promotes wise management of development on floodplains and community awareness of flood-related issues, helping to reduce the risks of flooding to life and property. FMA provides professional development and information sharing opportunities and represents the interests of Local Government at state and federal levels. Members include over 170 councils, catchment management authorities, government agencies, businesses and professionals involved in all aspects of urban and rural flood risk management.

Our members are at the front-line of flood risk assessment, flood management planning, decision making, emergency management and community engagement – please see [floods.org.au](http://floods.org.au)

### **Reducing the Flood Risk**

Natural disasters are costing Australia over \$560 million a year on average, and flooding from rivers and local catchments is the costliest, yet most manageable, of natural disasters. FMA considers the most effective means of reducing the costs of natural disaster response, recovery and reconstruction is by investment in well planned pre-emptive actions.

These include flood mitigation infrastructure, sustainable floodplain development and development of community resilience. FMA is firmly of the view that all these measures, including raising the dam wall for flood mitigation, need to be implemented to reduce the existing risk of catastrophic flooding for the community of the Hawkesbury-Nepean Valley.

### **Flood Mitigation Benefits of Raising the Dam**

As noted in the EIS (Summary pg.9) numerous dam raising projects such as that proposed, and a number of significantly greater scale, have been undertaken across Australia and other parts of the world. Such projects have universally recognised significant social and economic benefits for both

water supply and, as in this case, flood mitigation.

The EIS (Summary pg.7) states:

“Based on the Taskforce Options Assessment Report (INSW 2019), and subsequent investigations, the Project would significantly reduce the risk to life and allow more time for evacuations during critical flood events. By reducing the depth and extent of flooding, it would provide a reduction to property damages to people’s homes and communities by on average around 75 percent over the long term.”

The EIS (pg.15-83) shows that the project would be extremely effective in reducing flood levels in a range of floods and locations, achieving for example a reduction of 4.1m in the depth of the 1 in a 100 chance in a year flood at the Windsor Bridge. This would reduce the chance of such a flood of that magnitude to about a 1 in 1500 chance in a year event (EIS, Figure 15.7.2.3, pg.15-84).

The EIS (pg.15-93) concludes that “...a substantially lower number of residential properties would be affected by flooding due to the Project and, therefore, the number of people requiring evacuation for flood events up to the 1 in 1,000 chance in a year event would also be lower with the Project.” For example during 1 in 100 and 1 in 1,000 chance in a year floods there would be 5,180 and 10,000 fewer residences inundated based on 2018 data (EIS pg.15-150).

The consequent reduction in risk to life, potential damages to private property and public infrastructure, and the on-going financial, psychological and health impacts on the community would be enormous.

### **Appropriate Land Use Planning Policies**

Despite the above, the social and economic benefits of the Project can be lost over time unless accompanied by appropriate planning policies. The Project objective is to: “Reduce risk to life and property damage downstream in the valley by raising Warragamba Dam wall.” This objective cannot be satisfied if further development is allowed in recognition of the reduction in flood risk achieved by the dam wall raising. That would simply erode any gains over time, leading to an eventual return to pre-mitigation risk levels.

Gold Coast City Council undertook comprehensive resilience modelling to examine the consequences of following alternate planning pathways after various staged upgrades of the Hinze Dam (see [“Flood Mitigation Works and Planning Levels: A Policy Rethink? The Gold Coast Experience”](#), H Mirfenderesk, et al, 2014 FMA Flood Conference).

This modelling unequivocally showed flood resilience reduces dramatically where development continues based on mitigated flood planning levels. Conversely a sustained increase in flood resilience levels is achieved if future development is based on pre-mitigated flood planning levels.

Consequently, FMA encourages the adoption of a clear NSW Government policy, concurrently with the implementation of the Project, that requires future planning decisions to be made on the basis of flood risk levels existing before the dam is raised.

### **Conclusion**

FMA brings together expertise and experience from all aspects of flood protection, preparedness, response and recovery, to help make our communities safer in times of flood.

FMA is firmly of the view that the risk of catastrophic flooding for residents of the Hawkesbury-Nepean Valley is unacceptable, and a suite of integrated measures including flood mitigation infrastructure, appropriate risk-based land use planning and community awareness and resilience initiatives is required to appropriately manage the risk.

Raising the Warragamba Dam wall is the only feasible flood mitigation option.

Yours Faithfully



Ian Dinham

**President**

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