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Department of Infrastructure and Planning,
Major Projects Assessment,
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SYDNEY, NSW 2001
Email: Plan_comment@planning.nsw.gov.au

Woolgoolga to Ballina Pacific Highway Upgrade SSI-4963

Dear Sir/Madam

I am writing regarding the Woolgoolga to Ballina Pacific Highway Upgrade, in particular, my concern at the flood-related issues in the Woodburn to Ballina Bypass area. I have been through all the floods since 1945, including the 1948, 1954, 1974 and 1988-9 floods of the Richmond River and have been in the Broadwater SES for forty years. I have been a member of the Community Liaison Group (2005-2006) and the subsequent Flood Focus Group for the Woodburn to Ballina section of the Pacific Highway Upgrade.

I object to the Woodburn to Ballina Pacific Highway Upgrade in its proposed location east of Woodburn, through the floodplain and valuable agricultural land, and by the RMS' own admission that future floods will be worse. This submission identifies why the proposed route is of flood concern and if this route is approved, what recommendations I feel need to be included in any approval to minimise these impacts on the local communities and environments from flood impacts as a result of the Highway Upgrade.

The RMS suggests "the project would result in a substantial improvement in the flood immunity of the Pacific Highway, which is currently flood-prone in several places. This would improve the ability of people to evacuate when flooding occurs. It would also reduce the frequency and duration of highway closures due to flooding." This will not be the case in areas along the Woodburn to Ballina section when floods greater than the 1 in 20 year flood level occur, i.e. evacuation would only be able to occur in minor flood situations, and highway closures would still occur.

The main issues I request you condition the Roads and Maritime Service to change and adequately address are:

- The use of the 1 in 100 year flood level as the height to build the Highway, rather than the 1 in 20 year flood level the RMS has adopted for this section of the Highway. Various Government Department reports recommend avoiding development and infrastructure on floodplains if there is no other alternative, and if necessary, then the use of the 1 in 100 year flood level is recommended. This is particularly relevant with the predicted sea level rises that will affect the water levels in the Richmond River and its estuaries.

- Much of the highway will act as a barrier - a levee bank that keeps water banked up in the towns and surrounding agricultural lands for a longer period than would be without the Highway in its proposed location on the floodplain. To minimise flooding impacts, ensuring floodwater can get away in an acceptable timeframe (as quickly as possible) is essential. Floodwater being able to flow from Tuckombil Canal into the Evans River is critical as an escape route for floodwater. This means the number and size of culverts and viaducts between Tuckombil Canal and Langs Hill needs to be increased. This is in part based on earlier reports from the RMS where the viaducts were originally proposed to be 880m and the latest proposal is 330m.
- The additional barriers in the Richmond River, existing and during flood, that will inhibit floodwater escaping. For example: the sand build-up opposite RSL club in Ballina, the mouth of the Richmond River, and the upstream side of Missingham Bridge in Ballina; four additional bridges that restrict the flow, as well as logs and debris that accumulate on the piers, that weren't present at the time of the 1954 flood. Appropriate consideration to these barriers must be included in flood models prior to any approval for the project and mitigation measures reviewed to reflect the current and future scenarios.
- Hydrology and flooding mitigation measure HF4 identifies that "any permanent fencing at culvert and bridge crossings would need to consider the potential for blockage and be designed and operated in a manner that doesn't result in impacts on flooding". This measure needs to be extended to include all fencing-safety barriers along the Highway within the floodplain, not just where culverts and bridge crossings are present. This is particularly relevant when the RMS have argued that at the 1 in 20 year flood level that floodwater can flow over the Highway, in which case the fence and accumulating logs and debris will increase the barrier effect.
- Hydrology and flooding mitigation measure HF20 identifies that "the design of temporary fencing at culvert and bridge crossings would consider the potential for blockage and be designed and operated in a manner that does not result in impacts on flooding. This could include temporary fencing that is easily removed during flood events (where ample warning time is provided), or specifically designed fencing so the blockage of structures would not occur". As above, this measure needs to be extended to include all fencing-safety barriers along the Highway within the floodplain, not just where culverts and bridge crossings are present.
- Mitigation Measure HF23 (meeting flood management objectives) identifies that "continued application of the design objectives (road flood immunity and flood management objectives) would be required throughout the detailed design phase to provide ongoing identification and mitigation of flood impacts as a result of the project". Design objectives must also be aimed at minimising impacts to local communities and agricultural lands on the floodplain, not only in relation to flood immunity to the Highway. I believe the management objectives for flooding in the Richmond River are unacceptable, with the sole objective that floods are not worse as a result of the Highway Upgrade.
- The RMS has identified several locations proposed for ancillary sites within the Richmond Floodplain, with associated impacts including: some loss of flood storage and would create a minor obstruction to Tuckombil Canal floodplain flow (Section 8 site 1 and Section 9 site 1); block culverts across the project and have substantial upstream flood impacts (Section 8 sites 2a and 2b); partially block culverts across the project (Section 8 site 2c); block the southern underpass of the bridge over the Richmond River, and would create a major obstruction to flows during flood events which exceed the capacity of the river (Section 10 site 1a). The RMS also identifies that the use of Project Section 11 site 2 is considered to be unable to accommodate a construction site without unacceptable flood impacts. Any works or infrastructure should not be allowed on the floodplain which has been determined as having substantial upstream flood impacts, as creating major obstruction to flows during flood events, and as for Section 11 site 2 should be deemed as unacceptable flood impacts. To reiterate an important point made earlier, to

minimise impacts, ensuring floodwater can get away in an acceptable timeframe (as quickly as possible) is essential. Floodwater being able to flow from Tuckombil Canal into the Evans River is critical as an escape route for floodwater..

If these issues are not addressed by the Department of Planning and Infrastructure and the RMS, it will mean:

- Any floods bigger than the 1 in 20 year flood level will still cut off the Highway and isolate towns;
- Areas inundated by floodwater will remain affected for a longer period and at a greater height, causing delays to floodwater retreating and ability to clean-up, also affecting agriculture;
- More properties could be affected will have floodwater entering them at the 1 in 20 year flood height that never had floodwater enter at that level;
- In major floods more properties and houses will have water entering them than ever before;
- Increased damage to homes and increased clean-up;
- There will be continued and increased infrastructure damage eg the Highway will still need to be fixed, which could be avoided by building it to a higher level; and
- Increased cost to local, State and Federal governments = cost to community at some point (property value decreases, cost to agriculture, increased rates, flood levy, increased insurance, less money for other projects).

Additionally, the RMS identifies that of the ninety potential sites for ancillary facilities that have been identified for the project, including sites outside of the project boundary, 49 are located either on floodplains or below the level of the 20 year ARI flood and could therefore be affected by flooding and have hydrology and flooding impacts on upstream areas. The RMS further suggests that these sites would need to be built up on embankments to provide sufficient flood immunity. This is another reason why building on the floodplain should be avoided, ie it is an unnecessary additional cost.

All of this is at an increased cost to local, State and Federal governments, which at some point is an increased cost to the community eg property value decreases, increased rates, flood levy, increased insurance, and less money for other projects.

I note that in Grafton, the levee to protect the town will need to be increased by 50 mm to address the increased height of water as a result of the proposed 2nd bridge pilons. If these impacts are acknowledged for Grafton surely the number of bridges between Woodburn and Wardell must be considered as a barrier to water movement.

The Roads and Maritme Service apparently say these impacts are acceptable. I say they are not. All effort must be made at the planning stages to ensure the impacts of flooding are not worse in any way as a result of the Highway Upgrade. We do not want avoidable flood-related impacts to be experienced in the Richmond River and surrounds due to poor government planning.

I believe there is an alternative, and that is the Flood Free Route proposed by the Woodburn to Ballina Community Liaison Group. The Flood Free Route was prepared and supported by 25 members of the Community Liaison Group. Mr Paul Forward ex-Chief Executive of the RTA told the General Purpose Standing Committee (December 2005) “If we are after a proper consideration of what is the most viable route for the Highway, I think we owe it to those community members who requested we look at the broader footprint that we should go about and do that.” These members

represented people from the local community. The RTA did investigate a flood free route but it was an independent proposal and not the option proposed by the group. The RMS did not investigate this Flood Free route.

Should you require further information, or verification of information provided in this submission please contact me on [redacted] or [redacted]

Yours faithfully

John Matthes