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Senders ref: MP09 0084 MOD 4 Addendum RTS

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Dear Ms Drummond

Subject: Calderwood Concept Plan MOD 4 – Addendum Response To Submissions

Thank you for your email dated 7 May 2010 requesting comments on the abovementioned addendum Response To Submissions (RTS). In response, we have reviewed the cover letter by Ethos Urban (5/05/20) and Appendix D Table of Submissions and Responses (22/4/20) provided by J Wyndham Prince and provide the following comments with regard to floodplain risk management.

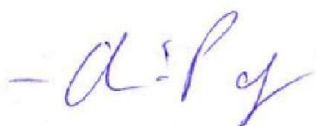
- The proponent's response has not adequately addressed comments previously raised by EES (and Council) relating to the impact of landform modification on flood behaviour or public safety of the existing or future community associated with the proposed floodplain development. This includes addressing the impacts of development on flooding, the impact of flooding on the development and addressing the safety of people in the development as a whole.
- It appears 'shelter in place' has been proposed by the consultant as an attempted risk management measure for future occupants, however the advice in relation to emergency management remains confused. We recommend that the emergency management approach is clear and achieves its aim of minimising risks to future occupants and that the implications regarding access and egress for self-evacuation of occupants and implications for the NSW SES and local flood planning have been thoroughly considered.
- At this stage, the emergency management discussion does not provide confidence that evacuation nor the risks associated with 'shelter in place' on future occupants have been adequately considered. Shelter in place as a strategy typically requires specific controls to be applied to future development to ensure the safety of occupants for the full range of flooding. This includes identification of the flood characteristics (and the typical development controls to manage these) and advice on how future lot owners will be made aware of the risks associated with flooding for all possible flood events particularly those greater than the flood planning level.
- It is also unclear how this approach to new development aligns with current planning controls for Calderwood urban release area under the SEPP (State Significant Precincts) 2005. The proponent also does not appear to have consulted SES and Shellharbour City Council on this proposed strategy. Further consultation with Council and the SES is required to establish requirements for an emergency response strategy and any associated modifications to the local flood plan, associated with urban development of flood prone land.
- The consultant has suggested that the high school site uses flood prone land as open space or playing field. This may be a more suitable use than other development types,

however the response does not provide detail on how this outcome will be ensured through this concept plan modification application and addressed in detail at development application stage.

- The response remains unclear on the evacuation strategy, discussing both evacuation and 'shelter in place'. In the event of evacuation, the response does not address what effective warning is available to the community, where residents would evacuate to, via which route, practicalities of this occurring in a major storm event, or that safe self-evacuation may be prevented due to properties being inundated prior to the dwelling in the proposed design. As mentioned above, where evacuation is not possible, the application is not clear on how safe on-site refuge will be achieved.
- In conclusion, the modifications and new information on flood behaviour should be appropriately considered and managed demonstrating that the impacts to and on the development and its users have been managed, and are capable of being addressed in detail at development application stage. This includes outlining relevant land use planning requirements and development controls to manage the risk.
- As outlined above, the proposal is providing for increased human occupation of flood prone land. We therefore maintain that the issues previously identified relating to public safety and impacts of landform modifications on off-site flood behaviour have not yet been clearly addressed. It would remain appropriate that consultation occurs with the SES and Council to facilitate safe development and to ascertain the appropriate flood development controls.

If you have any questions about this advice, please do not hesitate to contact Mr Calvin Houlison, Senior Conservation Planning Officer, via calvin.houlison@environment.nsw.gov.au or 4224 4179.

Yours sincerely



20/5/20

Chris Page

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