

Our Ref: ID 1623
Your Ref: SSD-23512960

23 May 2022

Patrick Andrade
Department of Planning and Environment
4 Parramatta Square, 12 Darcy St
PARRAMATTA NSW 2150

Via email: nahid.mahmud@dpie.nsw.gov.au

Dear Patrick,

Request for advice on the Glenwood High School Flood Emergency Management Plan (FEMP)

Thank you for providing NSW State Emergency Service (NSW SES) the Flood Assessment and a Flood Emergency Management Plan (FEMP) for the proposed development at Glenwood High School.

The NSW SES is the agency responsible for dealing with floods, storms and tsunamis in NSW. This role includes, planning for, responding to and coordinating the initial recovery from floods. As such, the NSW SES has an interest in the public safety aspects of the development of flood prone land, particularly the potential for changes to land use to either exacerbate existing flood risk or create new flood risk for communities in NSW.

The NSW SES has reviewed the proposed FEMP and the flood risk information (e.g. local flood Plan, flood studies etc.) available to the NSW SES, noting the proposed development is at risk of flooding in a PMF and the adjacent roads may be cut by floodwaters. NSW SES is opposed to the imposition of development consent conditions requiring private flood evacuation plans rather than the application of sound land use planning and flood risk management. NSW SES also cannot endorse or approve flood emergency management plans, which is referred to in the Floodplain Development Manual (particularly section N7). We refer to the previous correspondence (our ref ID 1491) dated 15 December 2021 and provide the following additional advice to DPE regarding the FEMP:

- **Risk assessment should consider the full range of flooding, including consideration of the events up to the Probable Maximum Flood (PMF).** It is noted that the site itself is prone to flooding in a PMF, with depths of up to 1m. This depth is unsafe for children, and therefore they must not be exposed to the floods.

- The local and regional road network is also prone to local and riverine flooding and would require caregivers to ensure they have adequate time to collect the children prior to the roads becoming flooded. As this age group of students are largely unable to self-evacuate, the evacuation time would require additional travel time required for caregivers to reach the building prior to access becoming affected and proceed to safety. **Evacuation must not require people to drive or walk through flood water.** Therefore ideally the school would be closed prior to the impact of flooding.
- **Development strategies relying on deliberate isolation or sheltering in buildings surrounded by flood water are not equivalent, in risk management terms, to evacuation.** Sheltering in a building within the flood extent is not safe, as proposed in section 7 of the FEMP. Sheltering in buildings where entrances and exits may become flooded in the larger floods may result in isolating the children potentially without food or water for several hours or more depending on the weather system/s. Isolation also increases the risk of fire or medical emergencies and likelihood of caregivers entering floodwater to get to their children. It is unrealistic to assume parents or caregivers will not attend the school to pick up children in circumstances of flooding.

Section 7 of the FEMP should be reworded to clarify that the primary strategy is ensuring early closure of the school, for instance based on a severe weather warning for flash flooding or as there is no flood warning system and there is likely to be rapid rises, on the first sign of flooding. This would allow additional time for caregivers to pick up the children.

A contingency plan would be to walk out of the area at risk of flooding along pathways. Design of the new school buildings should also ensure an elevated walkway to the remainder of the school from the upper levels of the buildings. There would therefore be no need to shelter in place.

- **Development strategies relying on an assumption that mass rescue may be possible where evacuation either fails or is not implemented are not acceptable to the NSW SES.** This may occur if caregivers are unable to safely reach the children during a flood.
- There are no detailed warnings provided for Cattai Creek (or Caddies Creek), including Flood Warnings and Flood Bulletins. Section 8 of the FEMP must be updated to reflect this. Currently, the warnings for this area consist only of the generalised flash flood warnings provided by the Bureau of Meteorology embedded within the Severe Weather Warnings.

- For completeness, reference to the NSW SES issued Evacuation Orders as a separate section could be included in section 3 of the FEMP.

In summary, the preferred emergency strategy for the school is early closure prior to the commencement of flooding and before the start of the school day. As a contingency, at the first sign of flooding, people located in the north-eastern part of the school should relocate to an area that is not at risk of flooding.

Please feel free to contact Elspeth O'Shannessy via email at elspeth.oshannessy@ses.nsw.gov.au should you wish to discuss any of the matters raised in this correspondence. Please refer all general correspondence to rra@ses.nsw.gov.au.

Yours sincerely,



Peter Cinque
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NSW State Emergency Service