

Our Ref: ID 1723
Your Ref: SSD-38600121

04 October 2022

Tim Henderson
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email: tim.henderson@enstruct.com.au

Dear Tim,

Environmental Impact Assessment for the State Significant Development (SSD) Alexandria Health Centre 28-32 Bourke Road Alexandria

Thank you for the opportunity to provide comment on the Environmental Impact Assessment (EIS) for the Alexandria Health Centre 28-32 Bourke Road Alexandria (the site). It is understood that the proposed development is comprised of medical centre uses, basement car park and anchored by a mental health hospital.

The NSW State Emergency Service (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 consent authority will need to ensure that the assessment is considered against the relevant Ministerial Section 9.1 Directions, including 4.3 – Flood Prone Land and is consistent with the NSW Flood Prone Land Policy as set out in the NSW Floodplain Development Manual, 2005 (the Manual). Attention is drawn to the following principles outlined in the Manual which are of importance to the NSW SES role as described above:

- **Development should not result in an increase in risk to life, health or property of people living on the floodplain.** It appears the site is isolated by flooding around the 10% AEP event (Alexandra Canal Catchment Flood Study, 2010). This is considered quite frequent in occurrence. The Civil Engineering Draft SSDA Report from July 2022 (the Report) identifies that the site is *“located near a sag point on Bourke Road and is located in a high flood risk zone with major overland flow expected at or near the site”*. The proposal of a new hospital on highly flood prone land should receive the highest level of scrutiny due to the critical and sensitive nature of the proposed use as identified in the EHG response (dated 15/08/2022).

- In addition, NSW SES supports the following statement in the EHG response (dated 15/08/2022) *“The flood modelling includes existing conditions only. Post development and future conditions must also be modelled. Specifically, the ultimate conditions with the proposed laneway network must be modelled. The new laneways will likely result in new flooding to the west and south of the site if water is conveyed from O’Riordan Street. This new flooding may lead to different flood levels for the development. If the laneway design is not available, a reasonable set of assumptions should be made for the flood model.”*
- **Risk assessment should consider the full range of flooding, including events up to the Probable Maximum Flood (PMF) and not focus only on the 1% AEP flood.** Although this has been addressed in the Report, consideration of emergency access and egress has not. Further detail regarding the duration and frequency of inundation is also required. Long duration events must be considered as these will dictate the maximum duration of isolation. The site is affected by mainstream flooding, so longer durations may occur as detailed in the EHG response (dated 15/08/2022).
- **Risk assessment should have regard to flood warning and evacuation demand on existing and future access/egress routes. Consideration should also be given to the impacts of localised flooding on evacuation routes.**
- **In the context of future development, self-evacuation of the community should be achievable in a manner which is consistent with the NSW SES’s principles for evacuation.** Clarification is required for the basement level proposed, and how it will be designed to be protected from floods up to a PMF. Research has demonstrated that basement levels, including basement car parking can be particularly vulnerable to flood risks, as floodwaters can enter a basement at a rapid rate once the entry threshold level is exceeded (e.g. [Collier et al, 2017](#)).
- **Evacuation must not require people to drive or walk through flood water.**
- **Development strategies relying on deliberate isolation or sheltering in buildings surrounded by flood water are not equivalent, in risk management terms, to evacuation.** 'Shelter in place' strategy is not an endorsed flood management strategy by the NSW SES for future development. Such an approach is only considered suitable to allow existing dwellings that are currently at risk to reduce their risk, without increasing the number of people subject to such risk. The flood evacuation constraints in an area should not be used as a reason to justify new development by requiring the new development to have a suitable refuge above the PMF. Allowing such development will increase the number of people exposed to the effects of flooding. Other secondary emergencies such as fires and medical emergencies may occur in buildings isolated by floodwater. During flooding it is likely that there will be a reduced capacity for the relevant emergency service agency to respond in these times. Even relatively brief periods of isolation, in the order of a few hours, can lead to personal medical emergencies that have to be responded to.

- 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.
- The 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 is opposed to development strategies that transfer residual risk, in terms of emergency response activities, to NSW SES and/or increase capability requirements of the NSW SES.
- Consent authorities should consider the cumulative impacts any development will have on risk to life and the existing and future community and emergency service resources in the future.

Please feel free to contact Elspeth O'Shannessy via email at rra@ses.nsw.gov.au should you wish to discuss any of the matters raised in this correspondence. The NSW SES would also be interested in receiving future correspondence regarding the outcome of this referral via this email address.

Yours Sincerely

A handwritten signature in grey ink, appearing to read 'P. Cinque'.

Peter Cinque
Senior Manager, Emergency Risk Management
NSW State Emergency Service