

28th February 2018

City of Parramatta Council
PO Box 32
Parramatta NSW 2124

Attn: Shaylin Moodliar – Senior Development Assessment Officer
Re: DA/1281/2016

Dear Mr Moodliar,

Thank you for the opportunity to provide comment on the planned development at 12 Station Rd, Toongabbie. The New South Wales State Emergency Service (NSW SES) is the combat agency for floods, storms and tsunamis within NSW. An integral part of this role includes planning for, responding to, and coordinating early recovery efforts from flooding. As such, the NSW SES has an interest in the public safety aspects of the development of flood prone land, especially where the development may exacerbate existing risk or create new risk areas. While planning controls for flooding applies to land in the flood planning area defined by Council (normally the 1% AEP event +500mm freeboard), the NSW SES plans for events up to the probable maximum flood (PMF).

The NSW SES's primary strategy to protect life during a flood is evacuation from the hazardous environment to an area above the PMF located outside the floodplain.

It is noted that the Certificate of Site Compatibility requires the applicant to demonstrate how people dependent on care can be evacuated in case of emergency. Shelter in place does not constitute evacuation and there is no clear indication of intent to evacuate in the documents provided.

The NSW SES does not support the proposed development, for the following key reasons:

- Placement of a vulnerable population within a high flood risk area.
- Unsuitability of shelter-in-place
- Lack of evacuation strategy
- Difficulty of rescue
- Increased complexity of response operations and demand on emergency services.
- Potential for displacement of floodwaters onto neighbouring properties due to bulk landfill as part of the development.

Vulnerable population

The development application is for a 128-bed aged care facility. It is noted from the applicant's Statement of Environmental Effects that the facility is being designed for a cohort where *"the average age of occupants is 85 years and over and the majority of the occupants will have some form of disability and impairment (such as dementia)."*

Flood models developed independently by City of Parramatta Council, and the applicant, show some variation in expected flood impacts. However, both indicate that the site will become isolated by a flood event greater than the 1% AEP and less than the PMF. There is no disagreement that the site will experience indirect and direct impacts of flooding across the range of events. The intentional placement of a vulnerable population into an area where such does not already exist, cannot be supported.

Shelter-in-place

Numerous documents provided by the applicant advocate a shelter-in-place strategy. This response strategy leaves residents vulnerable to secondary risks and does not actually remove them from the hazard. The NSW SES does not support shelter-in-place as a primary response strategy.

While available modelling suggests that flooding of the site from a single event is likely to be of relatively short duration, analysis of historical flood levels, including the 1986 and 1988 flood events within the Parramatta River catchment, indicate a propensity for multi-peak flood events, caused by multiple rain bursts over consecutive days. This is consistent with the sensitivity expected of a flash flood catchment. By way of example, the April 1988 flood event saw a series of seven peaks over 3 days with no return to "normal" water levels between peaks.

In combination with the extended duration of a multi-peak event, the resultant damage to infrastructure has the potential to make the area unfit for ongoing habitation for a significantly longer duration, consequently increasing the duration of entrapment. Surrounding roads and infrastructure in the wider local network may be unserviceable for an even longer duration due to debris and/or damage.

As a result, many measures, such as the provision of 3 days food and medication supply (page 16 Flood Issues Summary – Molino Stewart) and on-site power generation to supply electricity to the facility for 8 hours (applicant's Flood Emergency Response Plan) may prove inadequate in floods of greater magnitude than the 1988 event (which was less than a 1% event) necessitating the mass rescue of trapped residents.

Lack of evacuation strategy

The NSW SES policy is to pro-actively evacuate residents before floodwaters affect the area. Evacuation (rather than rescue) ensures public safety and eliminates the need for high-risk, time-critical rescue operations due to inundation; resupply operations due to prolonged isolation; and maintains the safety of residents in the face of extended utilities outages.

Shelter-in-place is not an evacuation strategy as it does not remove people from the hazard area. The chance of successful evacuation is lessened by the short warning time for flooding at the site. The age, and physical and mental condition, of the residents of the development are not conducive to self-evacuation, and would require a multi-agency response incorporating specialist medical transport vehicles. Even with the installation of the proposed flood warning device, it is unlikely that the evacuation would be successful. Any attempt at evacuation of residents in response to a flood evacuation order is likely to be further compromised by rapidly rising flooding on surrounding roads. In addition, many of the residents would require transport to specialist care facilities, rather than general evacuation centres. The NSW SES cannot guarantee that it will have resources to facilitate the evacuation of patients from this site.

Difficulty of rescue operations

Where evacuation and shelter in place are not viable, rescue is the only remaining option. The location of the site, with multiple approach routes cut by flooding, makes access for rescue teams hazardous and difficult. Low points on access roads are likely to be cut by higher hazard flooding than that experienced at the site, resulting in a higher risk profile for rescuers, or a complete inability to reach the site. As stated previously, this large scale rescue operation will require a multi-agency approach including specialist medical transport vehicles. The proposed use of the site to house a vulnerable population represents a further threat to the success of either evacuation or shelter-in-place, and is not supported.

Increased operational complexity and demand on emergency services

The NSW SES cannot support plans that result in a requirement for shelter-in-place, or likely evacuation or rescue, of vulnerable communities. Operational complexity is brought about by the scale of the event, and the diversity of the response required. Emergency service resources will already be heavily engaged in responding to the existing threat due to the scale of a Parramatta River flood event. Furthermore, weather events likely to cause this type of flooding are likely to cause simultaneous flooding on other major waterways within the Sydney Metropolitan area including the Hawkesbury-Nepean, Georges and Cooks Rivers. This will result in greater competition for finite emergency service resources.

The proposed population for the development will require assisted evacuation and, in many cases, ambulance assistance. This demand does not currently exist at the site and to add this complex demand to any existing emergency response is not acceptable.

Displacement of floodwaters

The importing of 1236m³ bulk fill onto the site reduces the sites ability to carry floodwater. While the site is not within the floodway, it does provide flood storage. Acknowledging that catchment-wide effects may be small, the potential for local impacts is a concern with a distinct possibility of exacerbating flood impacts on surrounding properties. Furthermore, the design of the building could channel water away from the floodway and into the surrounding floodplain.

I trust that the issues above have been covered in sufficient detail. If you require further information, please contact George Jeffreys on 8811 7700 or george.jeffreys@swd.ses.nsw.gov.au

Yours Sincerely

A handwritten signature in cursive script, appearing to read 'P. Cinque'.

Peter Cinque ESM OAM
Sydney Western Region Controller
New South Wales State Emergency Service