

30 May 2024

Liam Allen
Development Manager
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3/77 Market Street
Wollongong NSW 2500

Via email: lallen1@irt.org.au

Dear Liam,

Our ref: 24050181_L01V01_Flood_Emergency_Response_Strategy

Retirement Village at 17A Murrarar Rd, Towradgi – Flood Emergency Response Strategy

Water Technology has been engaged by Illawarra Retirement Trust to prepare a Flood Emergency Response Plan (FERP) for the proposed redevelopment of a retirement village at 17A Murrarar Road, Towradgi (Lot 100, DP776493, Lot 39 DP27386, Lot 300 DP571212, Lot 505 DP833242, Lot 1 DP704687 and SP11647).

This letter sets out the most appropriate flood emergency response strategy for the proposed development. The aim of the strategy is to protect life. It is not within the scope of the strategy to protect property. A FERP and a risk assessment are currently being prepared based on the emergency response strategy summarised in this letter.

RECOMMENDED FLOOD EMERGENCY RESPONSE STRATEGY

Shelter in Place (SIP) is a flood emergency response strategy that may be adopted when there is an appropriate refuge on site above the PMF level. The NSW Department of Planning and Environment (DPE) has released a draft shelter-in-place guideline (2022), which suggests that SIP can be the most appropriate flood emergency response strategy when off-site evacuation cannot be achieved and where flooding can occur with little notice. Given that there may be little or no lead warning time available before the site is isolated by floodwaters (potentially less than 15 minutes), there would not be sufficient warning of potential flooding to fully evacuate the site and evacuation would not be an appropriate flood emergency response strategy. The site would likely be isolated for a maximum of 6 hours and all dwellings and the club house have floor levels above the PMF level. In addition, internal pedestrian routes between the dwellings and the club house are above the PMF level. Sheltering in place is therefore the most appropriate strategy for the site, with sheltering in place triggered by the observation of floodwaters on site or in Murrarar Road in front of the driveways.

In greater detail, the recommended flood emergency response strategy is as follows:

1. A number of staff and residents are to be nominated as Flood Wardens. One will be nominated as Chief Flood Warden, preferably a staff member. Some residents will need to serve as Flood Wardens as there will not be a staff presence on site 24/7.
2. There must be at least 2 Flood Wardens on site at all times that the site is in operation.
3. Flood Wardens will subscribe to relevant weather alert services (BoM Weather app, NSW Hazards Near Me app)



4. Flood warning signage will need to be installed around the retirement village (all carparks, communal areas, apartment buildings and in the vicinity of all villas). Signage will detail that the retirement village is subject to flooding and provide the following instructions:
 - If flooding is occurring on site or in Murrannar Road in front of the site, take shelter in either your home or in the club house
 - Do not shelter in the basement
 - It is never safe to walk or drive through floodwaters.
5. When the BoM Weather app indicates there is at least a 25% chance of over 55 mm of rain falling in any 3-hour window, or when a Severe Weather Warning is issued, or when intense rainfall is observed:
 - During the relevant 3-hour window Flood Wardens will visually monitor Murrannar Road in front of the driveways
 - The Chief Flood Warden will communicate to the residents that intense rainfall is expected and flooding of local roads and the basements is possible.
6. If floodwaters are observed in Murrannar Road in front the site's driveways or in the flood storage areas:
 - Flood Wardens will announce over a PA system:
 - The site is isolated by floodwaters
 - All site occupants should take refuge in the club house. Residents may take shelter in their dwellings if these have back up power supply. All dwellings and the club house are above the PMF level and internal access routes would also be above flooding in events of all magnitudes.
 - Anybody in the basement must immediately make their way upstairs. It is too late to move your car.
 - It is too dangerous to leave the site by car or on foot, and all site access points have been closed.
 - Flood Wardens will activate barriers across the vehicular entries to the site.

The above strategy would require the following measures to be put in place:

- Flood Wardens are to be subscribed to the BoM Weather App and the NSW Hazards Near Me App
- Flood Wardens on duty must be able to open the club house for site occupants at all times
- The Chief Flood Warden (or Flood Warden on site) is to have access at all times, to a laptop/tablet/smartphone with 4g/5g internet access and at least 24 hours of battery capacity
- Signage to be placed around the site (all carparks, communal areas, apartment buildings and in the vicinity of all villas) and in the basements
- Barriers, such as boom gates, that can be placed across the vehicular entries to the retirement village.
- Public Address system audible in all parts of the site during heavy rainfall, including the basements. The system must have back up power supply (e.g. battery) or be connected to the power generator (refer to next point).
- A back-up power generator located above the PMF level. The club house must have a back-up 8-hr power supply. It is recommended that all dwellings also have a back-up power supply so that residents may take shelter within their homes.
- All buildings used for shelter-in-place (all residential buildings and the club house) must be designed by a structural engineer to withstand the forces of floodwater, debris and buoyancy of the PMF



- Non-perishable foods and drink should be stored in the club house
- Residents should be encouraged to store non-perishable foods and drink in their own homes
- A suitable number of first aid kits and a list of emergency contact details should be kept in the club house and each of the residential apartment buildings.

Yours sincerely

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