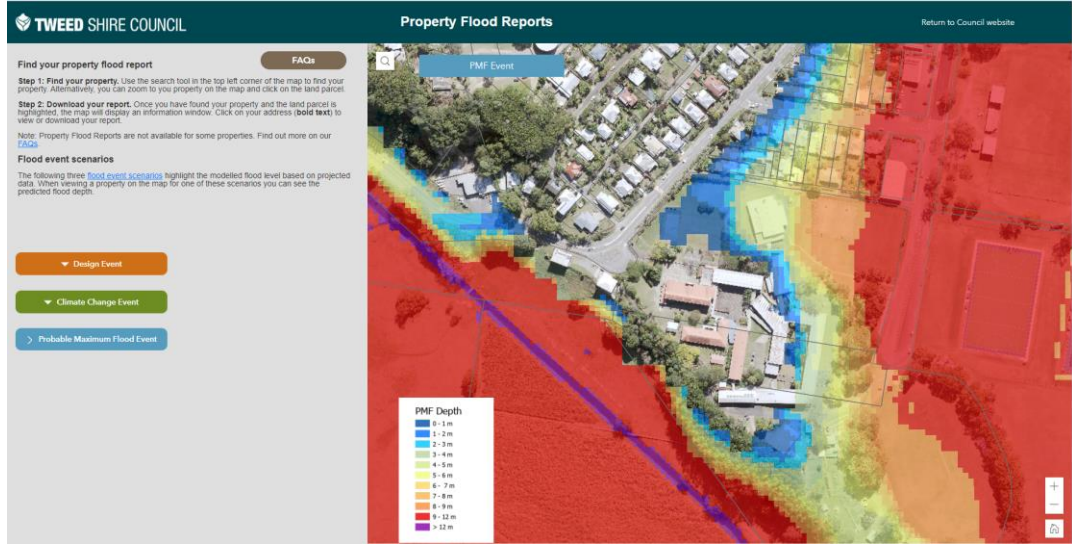


Comment	Response
SES	
<p>Risk assessment should consider the full range of flooding, including events up to the Probable Maximum Flood (PMF) and not focus only on the 1% AEP flood.</p>	<p>Noted, TTW's flood impact assessment (18th August 2022) considers the 1% AEP flood, the 0.2% AEP flood and the PMF event. PMF protection is available on 14500sq.m of the 46780sq.m site plus the floor levels above ground floor on Building 1, Building 3A and Building 3B as well as all floors of existing building A. The amount of land which is flood free in the PMF event is shown in the Tweed Shire Council Property Report as shown in the image to the right; which is about 14,500sqm of the 45,780sqm site which is flood free during the probable maximum flood for consideration under an extreme event after the school is closed.</p>
<p>It is noted that the site itself is partially flooded in a 1% AEP event, with a small amount of land above the PMF (Murwillumbah CBD Levee and Drainage Study, 2018). Depth in some locations at the site exceeds 2 metres when the levees are overtopped. This depth is not safe for children, and they should therefore not be exposed to the flooding.</p>	<p>Noted, The amount of land which is flood free in the PMF event is shown in the Tweed Shire Council Property Report as shown in the image below; which is about 14,500sqm of the 45,780sqm. The amended FERP recommends 1. closure of the school, 2. Evacuation where necessary for any remaining on site as advised by SES, 3. consideration of the Flood free portion of the site for refuge in an extreme (PMF) flood event if needed.</p> 
<p>A fill strategy is proposed for the site to ensure new development is above the 0.2% AEP flood event (Flood Impact Assessment, page 3), which increases the flooding within High School Lane. Any cut and fill strategy and development must not increase the flood risk at adjacent site, and therefore should be discussed with the Environment and Heritage Group of the Department of Planning and Environment.</p>	<p>The additional flooding on High School Lane affects the road reserve only as per our previous response to Tweed Shire Council's query as follows; The change in flood condition effect is on the road reserve only. This localised nature of the flood level impact had been discussed with council during our presentation of 22 September 2021 and it was understood that this local affect was deemed acceptable by council. The change in flood flow is essentially ponding against the new retaining wall within the property line to protect the primary school building. The proposed flood</p>

Comment	Response
	<p>results confirm that there is no adverse impact on private property from the existing flood behaviour as a result of the development. There are minor local changes to flood levels and flow distribution within the school site and adjacent to the northern boundary along High School Lane, due to the new surface levels and building locations.</p> <p>The intent is to investigate these local localised effects and add additional road street drainage as part of the S138 works where necessary.</p>
<p>It is noted that the Wollumbin High School has a lower risk than the proposed site. In addition, as the Wollumbin High School is currently a nominated evacuation centre in the Tweed Shire Local Flood Plan. The NSW SES seeks information regarding what is planned for this site following transition of the students to the proposed Education Campus.</p>	<p>The revised FERP recommends if sufficient warning time has been provided prior to the onset of flooding, then closure of the school should be considered and coordinated with SES and emergency services.</p> <p>Peak flood levels are produced during the 36-hour storm event. This storm event would give all staff and visitors within the site plenty of time to</p> <ol style="list-style-type: none"> 1. Close the school and allow pupils to remain at home 2. Evacuate the school site where necessary 3. Further evaluate the flood free school areas in an extreme event <p>The Safety Manager is responsible for ensuring that the site grounds are checked for all staff and visitors.</p> <p>Emergency Assembly Point and Evacuation Routes If sufficient warning time is provided and a decision has been coordinated with SES to evacuate the school site, there is a suitable off-site evacuation route from the school buildings to Riverview Street. This Council Road is located above the PMF and provides a flood free access route to the north and west.</p> <p>The proposed Flood Emergency Assembly point is the external parking area to the north of building A for the Primary School, and to the south of Building A for the secondary School. These areas are both above the PMF level. Emergency Evacuation Routes and Assembly points are shown in figure 12.</p>
<p>Evacuation must not require people to drive or walk through flood water.</p>	<p>Noted, the evacuation route is described in the revised FERP and in brief above</p>
<p>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</p>	<p>Noted and agreed the order of action is to;</p> <ol style="list-style-type: none"> 1. Close the school and allow pupils to remain at home 2. Evacuate the school site where necessary 3. Further evaluate the flood free school areas in an extreme event

Comment	Response
<p>proceed to safety. Therefore, ideally the school would be closed prior to the impact of flooding.</p>	<p>The Safety Manager is responsible for ensuring that the site grounds are checked for all staff and visitors.</p>
<p>· Risk assessment should have regard to flood warning and evacuation demand on existing and future access/egress routes.</p>	<p>Noted</p>
<p>Consideration should also be given to the impacts of localized flooding on evacuation routes.</p>	
<p>· Development strategies relying on deliberate isolation or sheltering in buildings surrounded by flood water are not equivalent, in risk management terms, to evacuation.</p>	<p>Noted</p>
<p>Sheltering in a building within the flood extent is not safe, as proposed within the FERP and Flood Impact Assessment. 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.</p>	<p>Noted and agreed the order of action is to;</p> <ol style="list-style-type: none"> 1. Close the school and allow pupils to remain at home 2. Evacuate the school site where necessary 3. Further evaluate the flood free school areas in an extreme event <p>The Safety Manager is responsible for ensuring that the site grounds are checked for all staff and visitors.</p>
<p>The FERP should be reworded to clarify that the primary strategy is ensuring early closure of the school, for instance based on a flood warning. This would allow additional time for caregivers to pick up the children.</p>	<p>Noted and agreed the order of action is to;</p> <ol style="list-style-type: none"> 1. Close the school and allow pupils to remain at home 2. Evacuate the school site where necessary 3. Further evaluate the flood free school areas in an extreme event <p>The Safety Manager is responsible for ensuring that the site grounds are checked for all staff and visitors.</p>
<p>In addition, reference to Evacuation Warnings and Evacuation Orders (for example in section 6 and section 8 of the FERP) should be replaced with “Advice”, “Watch and Act” and “Emergency Warning”. This is the Hazard Watch framework adopted by NSW SES in 2022. For further information, refer to the Hazard Watch website.</p>	<p>Noted</p>
<p>§ NSW SES is opposed to development strategies that transfer residual risk, in terms of emergency response activities, to NSW SES and/or increase capability</p>	<p>noted</p>

Comment	Response
<p>requirements of the NSW SES. Section 6.2 of the FERP should be removed completely.</p>	
<p>· 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.</p>	<p>Noted and agreed the order of action is to;</p> <ol style="list-style-type: none"> 1. Close the school and allow pupils to remain at home 2. Evacuate the school site where necessary 3. Further evaluate the flood free school areas in an extreme event <p>The Safety Manager is responsible for ensuring that the site grounds are checked for all staff and visitors.</p>