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Design Advice

To:	Ross Cooper	Tattico	By Email Only
	Phil Eaton	Greenstone Group	
From:	Martin Feeney		Project: 117615
Date:	21 June 2022		Page: 1 of 1
For:	☐ Action / ✓ Information		DA: 3
Subject:	65-71 Federal Street Firefighting water supplies		

Ross and Phil,

In response to a request from Watercare to outline the relationship between the city water main supply infrastructure and the firefighting water supply requirements, we advise as follows.

The fire protection systems proposed for the building include a sprinkler system with a Class A water supply, which includes an on-site water storage tank sufficient to meet the design demand for sprinkler water supply in accordance with the Sprinkler Standard. This tank will be initially filled from the city municipal water supply system. Top up of the water storage tank to compensate for evaporation and minor losses (associated with testing) will be required as typical for any sprinkler-protected building with a water storage tank (there are currently several in the Auckland city cbd). However, the full tank storage volume will not need to be replenished unless there is a fire event which activates sprinklers which then depletes the entire water storage capacity (approx. 208,000 litres). This refilling will occur after the fire event and is not relied on during the fire event. The principal reason for having on-site sprinkler tank water storage is to reduce dependence on the city municipal water supply system for sprinkler water supply.

In addition, the city municipal water supply system will be relied on in a relatively modest capacity to supplement the firefighting water supply in a fire event. This will be for fire hydrant water supply to the same extent as every other building with a hydrant system for firefighter use, except that in the case of the building at 65 Federal St the design firefighting water demands at the lowest end of the range (in spite of the building height, because the building is sprinkler protected). The hydrant system will not rely on water pressure exceeding the usual nominal minimum 100 kPa, because the hydrant system will utilise the FENZ pumper appliances as well as having on site hydrant booster pumpers for supplementary pressure boost.

Regards,

Martin Feeney

Martin Feeney
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