

**Topic:** Fire Infrastructure at 1-7 Andrews Avenue

**Date:** 2024-10-11

**Attention:** Waverley Council

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The intent of this memo is to conduct a review of the proposed fire infrastructure at 1-7 Andrews Avenue and the reasoning behind it.

Pressure & flow enquiries were completed on both Andrews Avenue & Glen Lane. The standard approach typically undertaken is to request information from Sydney Water, who models the predicted results in their network. Due to the poor results, the client then organised an on-site physical test to confirm Sydney Water's data.

The results indicated that a maximum of 18L/s was available at a pressure of 240kPa.

The development is four stories high, but less than 25m effective height. This means the development will require sprinklers, as per NCC Section E. During the first 30 minutes of a fire, the combined sprinkler & hydrant flow rate required is 22 L/s, which is higher than what is available in the adjacent water mains.

To make up for the insufficient pressure & flow, an on-site tank & pump will be required to meet the minimum requirements of the combined hydrant & sprinkler system.

This means two fire pumps will be required. These pumps will require a fire pump room of minimum size 5.6m x 4.1m, as the pumps must maintain 1m clearance around them, as per AS 2941. In addition, an airlock is required between this room and the fire stairs.

By AS 2118.6, the minimum size of the hydrant & sprinkler components of the fire tank are 25KL each. As noted in AS 2419.1 due to the requirement of a large bore connection, and the limitations this places on the height of the tank, this 50KL tank will occupy a space approximately 53sqm.

Should you have any queries please feel free to contact me to discuss.

Kind regards,

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Founder & Director

