

Date: 26 September 2019

Project No: F2690

Gannet Developments

Attention: Michael Vance

Dear Michael,



Re: 60 Binalong Ave Allambie

1.0 – Introduction

We write in relation to the above address and the proposed installation of a water tank and pumps for the fire hydrant water supply.

It is understood that a section 96 Modification needs to be lodged with council and they have requested to have a letter from a fire engineer that states that this is the best solution to the issue to support the application for tanks and pumps.

2.0 – Issue

The original building design was based on the Sydney Water Pressure and Flow application.

The water application is attachment 1 and showed that the available flow of 10/s was achievable at 412kPa. The maximum flow was 15L/s. These pressures and flows allowed the building design to be based on supplying the hydrant system directly from the town's main.

A flow test of the main was undertaken as due diligence to confirm the Sydney Water Pressure and Flow application. The results of the flow test are attachment 2.

They show that at:

- 5L/s the available pressure is 750kPa.
- 9L/s the available pressure is 100kPa

9L/s is the maximum flow available from the main.

3.0 – Conclusion

Based on the supplied pressure and flow results of the test these are not sufficient to supply an onsite hydrant system directly from the town's main.

The minimum supply detailed by AS2419.1-2005 for a single hydrant is 10L/s at 150kPa (for a feed hydrant) and 250kPa (for an attack hydrant)

Fire hydrant type	Minimum required flow rate (L/s)	Minimum required residual pressure (kPa)	
		NSW	All other states and territories
Feed fire hydrant, unassisted	10	150	200
Attack fire hydrant, unassisted	10	250	350
Internal and external fire hydrants when boosted by a fire brigade pumping appliance	10	700	700

Figure 1 - Table 2.2 of AS2419

Essentially to address the lack of flow and pressure an onsite tank and pressure boosting pumps are required to meet compliance with AS2419. There is no alternative compliance option.

We also confirm that a Fire Engineering Performance Solution is not viable in this instance to address the low flow and pressure.



4.0 – Limitations

This report specifically excludes the following:

- Determining full compliance with the BCA in relation to the building design or services design.
- Consideration of matters outside the scope or limitations of the BCA.
- This report does not provide approval for any Part 4A Certificate under the Environmental Planning & Assessment Act 1979 or Regulation 2000.
- Consideration of any structural elements or geotechnical matters relating to the building, including any structural or other assessment of the existing fire resistance levels (FRLs) of the building.
- Determining compliance with the Disability Discrimination Act 1992.
- Consideration of local Environmental Planning requirements, policies and/or guidelines.
- Reporting on hazardous materials, OH&S matters or site contamination.
- Compliance assessment of Heritage Issues or energy efficiency
- Our assessment does not include impacts from fire such as protection of property, the interruption of business due to fire, the
- impacts from fire on the broader environment and similar matters.

Regards

A handwritten signature in black ink, appearing to read "C. Munoz".

Carl Munoz
Fire Engineer
for AED Fire
Master Fire Engineering (UWS)
Adv. Dip. Mech. Eng.

Reviewed by:

A handwritten signature in black ink, appearing to read "Lee Clark".

Lee Clark
Director for AED Fire
Master Fire Engineering (UWS)
Grade C10 – Fire Engineering Compliance BPB No 2770



Statement of Available Pressure and Flow



Anthony Rocca
10-18 Orchard Road
Brookvale, 2100

Attention: Anthony Rocca

Date: 21/08/2019

Pressure & Flow Application Number: 695173
Your Pressure Inquiry Dated: 2019-07-23
Property Address: 15 Nargong Road, Allambie Heights 2100

The expected maximum and minimum pressures available in the water main given below relate to modelled existing demand conditions, either with or without extra flows for emergency fire fighting, and are not to be construed as availability for normal domestic supply for any proposed development.

ASSUMED CONNECTION DETAILS

Street Name: Jennifer Avenue	Side of Street: Across
Distance & Direction from Nearest Cross Street	10 metres West from Binalong Avenue
Approximate Ground Level (AHD):	83 metres
Nominal Size of Water Main (DN):	100 mm (Nominated Asset 2415999)

EXPECTED WATER MAIN PRESSURES AT CONNECTION POINT

Normal Supply Conditions	
Maximum Pressure	90 metre head
Minimum Pressure	53 metre head

WITH PROPERTY FIRE PREVENTION SYSTEM DEMANDS	Flow l/s	Pressure head m
Fire Hose Reel Installations (Two hose reels simultaneously)	0.66	52
Fire Hydrant / Sprinkler Installations (Pressure expected to be maintained for 95% of the time)	5	51
	10	42
	15	29
Fire Installations based on peak demand (Pressure expected to be maintained with flows combined with peak demand in the water main)	5	47
	10	36
Maximum Permissible Flow	15	21

(Please refer to reverse side for Notes)

For any further inquiries regarding this application please email :

swtapin@sydneywater.com.au



PO Box 4679,
Sylvania Waters, 2224
admin@firecompliance.com.au
Phone 1300 576 055
ABN 41 143 535 184



HYDRANT FLOW TEST REPORT

Date: 26.08.2019
Time: 2.45pm
Site Address: 60 Binalong Ave Allambie Heights
Client: Jag Plumbing
Test Apparatus: PF1D
Technician: Murray. D

Towns Mains Results

Flow (litres/Sec)	Pressure (kPa)
Closed Head / Static	940
5L/S	750
9L/S	100
9.5L/S	0

Results: 100mm Mains only at client nominated location, No visible valves nearby

Signed: ARYAN ZAWITY

Disclaimer: Please note the above results are as of today's date and note that these results are not guaranteed in the future due to changes. This may be due to new construction sites in the area or Sydney Water Maintenance Services or any other factor. Fire Compliance and Maintenance does not take any responsibility if the above results cannot be achieved in the future.

FCM hold all relevant Registrations and Insurances applicable to the business. All personnel are suitably qualified and licensed in their field. Copies of relevant documentation can be provided on request.