



POSITION STATEMENT SUMMARY

Hydraulic fire safety system design

Position

Effective 5 December 2024, the following is a position of Fire and Rescue NSW (FRNSW):

FRNSW require a statement of available pressure and flow (or equivalent information) to be obtained from the water network utility operator and provided with any referral or application for advisory, assessment or consultancy services on any development proposal which involves the design or alteration of a hydraulic fire safety system. The issue date of the statement of available pressure and flow (or equivalent) must fall within the twelve (12) months prior to the date of referral or lodgement.

Note: A hydraulic fire safety system is defined in [schedule 2](#) of the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021*, and under [section 22 \(1\)\(b\)](#) the statement should accompany the application for a construction certificate.

The minimum design residual pressure of any reticulated water supply serving a hydraulic fire safety system is to be determined in accordance with AS 2419.1:2021, including whether the network utility operator's hydraulic modelling used for the statement is calibrated or uncalibrated, and whether field test support is recommended as per Appendix L of AS 2419.1:2021.

If the development is to include a performance-based design, the statement of available pressure and flow should be sought prior to seeking consultation on the performance-based design brief (PBDB), so that consideration can be given to the hydraulic design requirements and proposed performance solution.

Note: When the available pressure and flow is not commensurate to the hydraulic design requirements, onsite water storage and fire pumps may be required and their location needing to be considered within the design. The PBDB should indicate if a large-bore suction connection will be required.

Any hydraulic fire safety system design must ensure [accessibility of fire hydrants](#), including to any street fire hydrants or *large-bore suction connections* that are part of the fire hydrant system. The location of any required hardstand area serving a large-bore suction connection, required when there is insufficient flow in the mains supply, must also be considered within the design.

Note: A public road may not be suitable to serve as the required hardstand. Refer to FRNSW guideline [Access for fire brigade vehicles and firefighters](#) for further information.

Where the statement of available pressure and flow shows a sub-performing water main, consideration should be given to approaching the water network utility operator on the feasibility of upgrading the water main, particularly if other nearby developments are likely and the cost of any mains upgrade can be shared to be more cost effective and practical than providing onsite water storage and/or fire pumps.

Reference must be made to the FRNSW website to ensure this position is current at the time of use, and this position has not been superseded or revoked.

Fire and Rescue NSW

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Summary

This position statement stipulates to building proponents that a 'statement of available pressure and flow' ('the statement'), or its equivalent, must be obtained and submitted with any referral or application to FRNSW if the proposed development involves the design or alteration of a hydraulic fire safety system. The referral or application can relate to any advisory, assessment or consultancy service provided by FRNSW. The issue date as listed on the statement or its equivalent must fall within twelve (12) months of the date of referral or lodgement, to ensure currency of information.

Informative commentary clarifies that [section 22 \(1\)\(b\)](#) of the *Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021* requires the specifications of the hydraulic fire safety system design to be submitted. The term 'hydraulic fire safety system' is statutorily defined in [schedule 2](#).

The statement is necessary to determine the baseline (i.e. minimum) reticulated water supply performance by the water network utility operator, which then determines the requirements of the hydraulic fire safety system. The position emphasises that the statement is to be determined in accordance with AS 2419.1:2021, including whether the statement is based on calibrated or uncalibrated hydraulic modelling. In field test support may be necessary.

In circumstances where the development includes a performance-based design, the statement should be sought prior to seeking consultation on the associated brief. Without provision of the statement, FRNSW cannot duly consider the design requirements of any hydraulic fire safety system as relating to any proposed performance solution.

Informative commentary clarifies that the statement is used to determine if the available pressure and flow is not sufficient for the design, and whether onsite water storage and fire pumps may be needed to serve the hydraulic fire safety system, including if a large-bore suction connection is required.

This position reminds building proponents that accessibility of any hydraulic fire safety system, including street fire hydrants or large-bore suction connections, is paramount to the final design and the plans and specifications. This includes the location of any required hardstand area serving a large-bore suction connection.

Informative commentary notes that a public road may not be deemed suitable to serve as the required hardstand area, especially for any large-bore suction connection. Performance requirement C1P9 is not being satisfied if the fire brigade vehicle cannot adequately access the hydraulic fire safety system.

This position encourages building proponents to consider liaising with the water network utility operator on the feasibility of water main upgrades if the statement identifies a sub-performing water main. This may be a more viable option in circumstances where additional nearby development is likely, and associated upgrade costs being borne jointly thus more cost-effective than the alternative (i.e. provision of onsite water storage and/or fire pumps for each development).

This position statement has been authorised for release by Chief Superintendent Fire Safety, FRNSW.

Contact us

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