

Standards Alert

Supplementary design guideline for sewer pressure mains (D0002508) is now available.

This guideline provides planners and designers with:

- Additional requirements and guidance for the planning and design of new sewer pressure mains (to supplement other Sydney Water standards)
- Clarification of Sydney Water's expectations for these assets

Why has the standard been created?

This guideline has been developed to address identified vulnerabilities with sewer pressure mains, including lessons learned from recent pressure main failure incidents and outcomes from environmental audits.

It is aimed at reducing the risks associated with pressure main failures, while balancing performance and cost to ensure value for money for Sydney Water and our customers.

The guideline provides additional requirements and guidance to supplement other standards and specifications including the Sydney Water Technical Specification – Civil and the Sewage Pumping Station Code of Australia, Sydney Water Edition (WSA 04). The guideline should be read in conjunction with these documents.

What are the key new requirements?

The guideline contains both **requirements** and **guidance notes**. **Requirements** are mandatory and must be followed for all new pressure main projects after the publication of the guideline. **Guidance notes** are recommendations (i.e. not mandatory) that inform planners and designers on best practices, but also allow flexibility based on project specific needs.

The requirements and guidance notes are broadly grouped into the following categories:

- Redundancy and duplication

- Pipeline alignment and installation treatments
- Pipeline materials
- Valves and appurtenances
- Operations and maintenance planning
- Internal access for maintenance

Key requirements and guidance notes include:

- A requirement to develop contingency plans for pressure main unavailability (e.g. failure or planned maintenance) as part of the planning and design process for new SPSs and SPS upgrades involving significant increases to design flow. Additional guidance notes are provided regarding common contingency plan options (e.g. tankering, flow transfer, or duplication), but the specific details of the contingency plan are left to planners and designers to facilitate innovation.
- Requirements for pressure main installation treatments (e.g. backfill or encasement) to align with the minimum requirements for water mains (as outlined in WSA 03).
- Increased clearance requirements to align with Sydney Water's Technical guidelines for Building over and adjacent to pipe assets.
- Guidance on pipe material selection for sewer pressure mains, including a prohibition on cement lined pipes in locations susceptible to H₂S attack.
- A requirement for all weather vehicle access to pressure main appurtenances such as air valves, stop valves, and pump out scours.

What are the key benefits and impact to users?

Sewer pressure mains designed and constructed in accordance with the guideline will have the following key benefits compared to existing assets:

- Enhanced robustness and resistance to deterioration, reducing the likelihood of pressure main failure
- Greater ability to inspect and maintain, facilitating early intervention and reducing the likelihood of pressure main failure
- Improved ability to respond to incidents and manage SPS inflows, reducing the consequence of pressure main failure

The guideline sets out new requirements and guidance for planning and design of sewer pressure mains, but in many cases, these are already being incorporated in current Sydney Water projects (through the outcomes of risk assessments and stakeholder engagement). Accordingly, the main impact of this guideline will be to clarify Sydney Water's expectations for this asset class and streamline the design process.

For example, an investigation of ongoing projects identified that the vast majority of Sydney Water projects are already considering pressure main contingency in the planning and design process, so the corresponding requirements in the guideline are expected to have minimal impact on project delivery.

Several requirements, particularly those related to access points on pressure mains, are expected to have some impacts on delivery costs, however any additional capital costs will be minor in the context of constructing a new pressure main and are expected to be offset by the associated extended asset life (delaying the need for future renewal or replacement).

When can I start using the new standard?

New or updated standards generally apply only to projects that begin after the standard's publication date. There is no need to apply them retrospectively. However, in exceptional cases—such as those involving critical safety risks—early adoption may be advised.

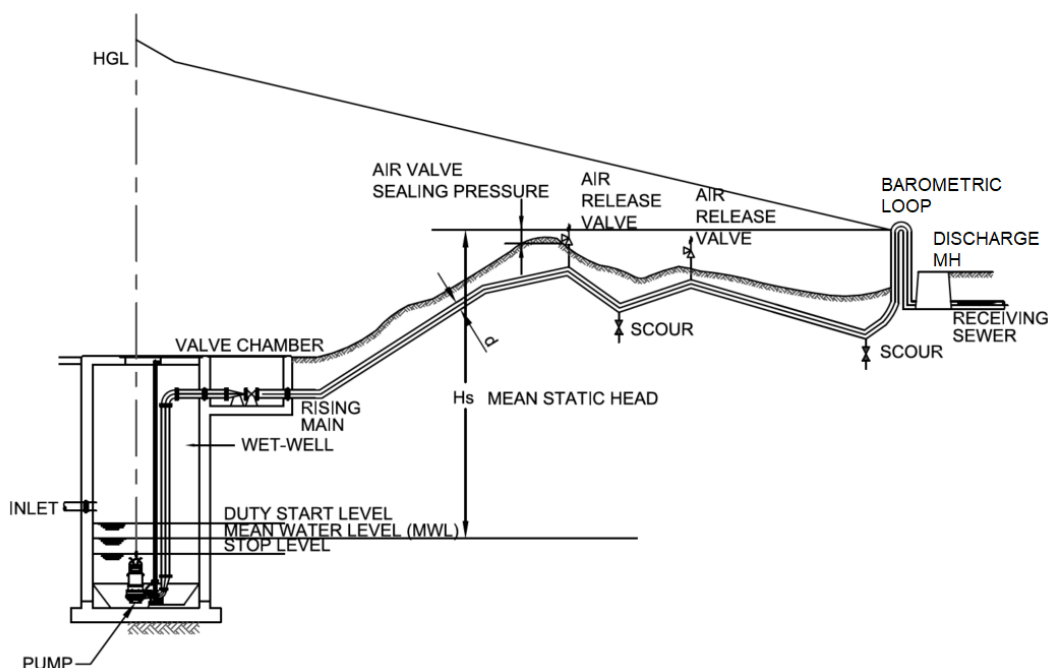
Where can I find the new standard?

The guideline is available on [iConnect](#) (for SW staff), [SWDelivery Portal](#) (for SW contractors), and the [Sydney Water website](#).

How can I provide feedback?

If you have any feedback on this guideline, please contact the author by email at: standards@sydneywater.com.au.

Please feel free to pass this alert onto others that may benefit.



Conceptual long section of a sewer pressure main