

Plumbing Solutions – edition 4

Multi Unit Developments

AS/NZS3500.2 Section 12 Multi-Unit Developments

For the purpose of this Plumbing Solution, a “Multi Unit Development” is defined as development of 3 or more residential buildings limited to 3 storeys in height.

The main lines of water and sanitary drains in multi developments for up to 20 residential buildings are constructed in accordance with AS/NZS3500 Plumbing and Drainage Standard. The main lines of water and sanitary drains are owned and maintained by a body corporate/property owner and may have, in most cases, one connection to SA Water’s system.

Multi unit developments can vary from 3 to sometimes in excess of 100 allotments, problems may arise in larger developments that may not be evident in the smaller developments. Problems can occur if multi unit developments are not designed correctly.

Some of these problems are:

- Difficulty in access to locate and clear sewer blockages.
- Lack of provision against overflow relief, if the main line becomes blocked.
- Drains becoming blocked due to insufficient grade.
- Poor water flow at tap outlets from undersized water services.
- Poor water quality near the “dead ends” of the main line.
- Water supply to all units needing to be isolated if repairs to the main line are required.
- Larger developments, provision may not be made for firefighting.

Additional Requirements to AS/NZS 3500

All plumbing and sanitary drainage work within each individual allotment must comply with AS/NZS3500.

Sanitary Plumbing

Installations and designs of the main lines of sanitary drains in a multi unit development of 3 or more residential buildings shall comply with either AS/NZS 3500 or the WSAA Sewerage Code of Australia.

Technical Requirements

- The minimum grades for property connection sewers using the AS/NZS 3500 are 1.65% for 100mm and 1% for 150mm.
- Drains must not be oversized for the purpose of obtaining additional grade. All drains should be sized according to fixture unit rating.
- An inspection shaft is to be installed immediately upstream of the branch junction to each allotment.
- A maintenance shaft is required to be raised to ground level to facilitate drain clearing and television equipment on the main line of the sanitary drain at each change of direction and at spacing of no greater than 150m on straight sections of drain.

Additional Provisions

In multi unit developments provision shall be made at each individual residential building for the following

- An inspection shaft immediately upstream of the main line of sanitary drain
- Additional overflow relief gully
- An open upstream vent.

Re use of existing drains in Community Title/Body Corporate developments

When buildings are constructed as part of a community title allotment development and are to be connected to a sanitary drain serving an existing building the following requirements apply:

A hydrostatic or air test is to be applied to the existing drain and any defects must either be repaired or the drain replaced with an approved material and retested on completion of the work.

Water Services

Installations designs of the main lines of the water service shall comply with either AS/NZS 3500 or the WSAA Water Supply Code of Australia.

- The development is to be divided into zones where the number of allotments within a zone affected by any shut-off at the main lines shall not exceed 40. The dividing or isolation valves that are fitted to the main line shall be at intervals not exceeding 300m.
- To maintain circulation of water, the main lines of the water service shall form a ring main or be provided, at surface level, with flushing points at any dead end of the water main.
- Fire services shall be provided in accordance with the fire authority requirements. External fire hydrants shall be located in accordance with AS 2419.1

If you have any questions about multi unit developments or the AS/NZS 3500 Plumbing and Drainage Standards or alternatively, if you would like copies of this or various editions of Plumbing Solutions, please contact Plumbooking on (08) 7424 1360 or email plumbooking@sawater.com.au

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