



Multi-unit developments

For the purpose of this technical note, a “multi-unit development” for sanitary drainage is defined as a development of three or more residential Class 1a buildings limited to a height of three storeys. A “multi-unit development” for a water service is defined as the main lines of water services located within common property of a multi-unit development of 20 or more residential buildings up to three storeys in height.

Introduction

In multi-unit developments, the main lines of sanitary drains shall be constructed in accordance with AS/NZS 3500.2:2015. The main lines of water and sanitary drains are owned and maintained by a body corporate or property owner and have, in most cases, one connection to the services providers’ infrastructure (for example the Water Corporation’s main sewerage system).

Water service main lines for more than 20 residential buildings shall be constructed in accordance with AS/NZS 3500.1:2015, section 17. This section specifies the minimum requirements for main lines of water services located within common property of the multi-unit development.

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

Some issues that may occur include:

Drainage

- ▶ Difficulty in accessing and clearing main drain blockages.
- ▶ Lack of provision for overflow relief if the services providers’ main sewer becomes blocked.

Water supply

- ▶ Poor water flow at tap outlets due to undersized water services.
- ▶ The water supply to all units needing to be isolated if repairs to the main line are required.

Drainage design requirements

Licensed plumbing contractors need to be aware of AS/NZS 3500.2:2015, section 14 which relates to the design requirements of sanitary drainage systems in multi-unit developments of three or more class 1a dwellings.

During the design phase of any multi-unit developments, provisions shall be made in the sanitary drainage system of each individual residential building or allotment as follows:

1. An inspection shaft in accordance with clause 4.4.2, immediately upstream of the junction with the main line of the sanitary drain.
2. Additional overflow relief from sewerage surcharge.
3. An open upstream vent.

In addition clause 14.2.2 requires that the main drainage lines of multi-unit developments serving 20 or more residential buildings shall be provided with a maintenance shaft. The maintenance shaft shall have ready access at ground surface for drain cleaning equipment and television inspection.

WaterMarked maintenance shafts shall be installed at each change of direction and main line junctions. The spacing of maintenance shafts along straight sections shall not exceed 150 m. No additional inspection openings will be required on the main line of sanitary drains where maintenance shafts are installed.

Sewerage design codes

Main drainage lines of multi-unit developments serving residential buildings shall be designed and installed in accordance with AS/NZS.2:2015. Designs using provisions of sewerage design codes, such as the Sewerage Code of Australia, are possible under a performance solution to the provisions of the Plumbing Code of Australia.

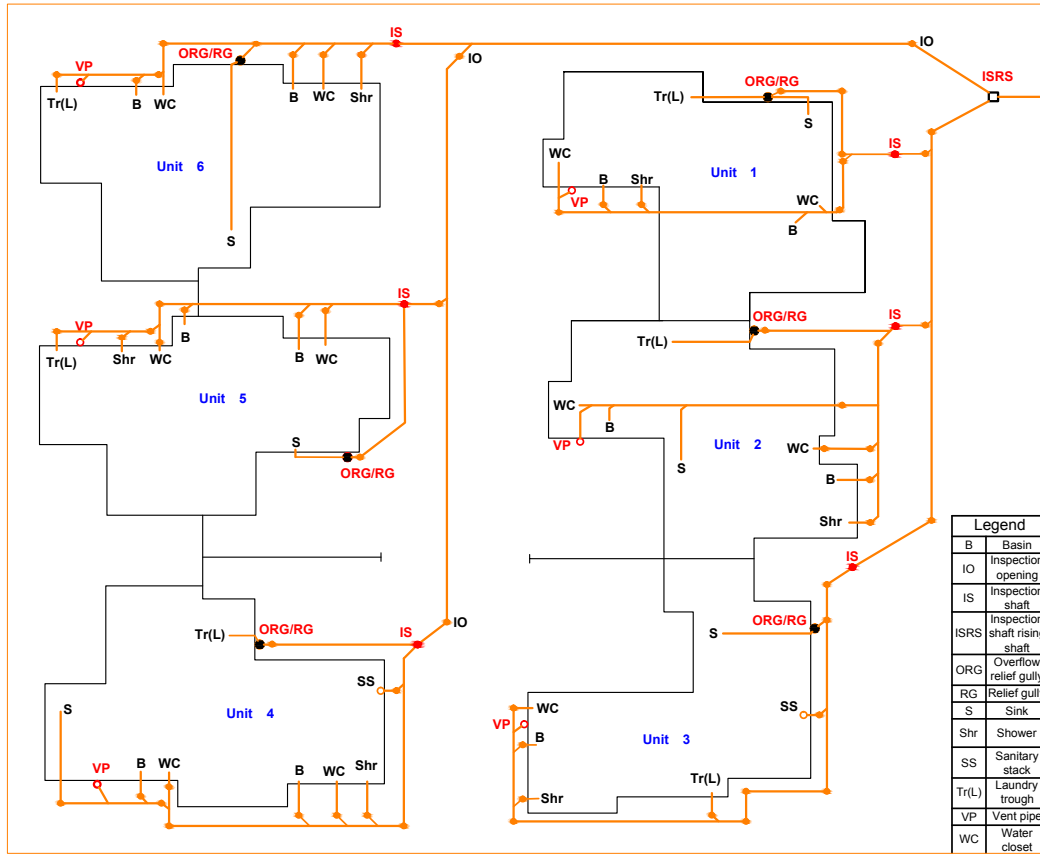
Note 1

Where two or more Class 1 dwellings are located under the same roof, each individual dwelling is considered to be an individual building (see National Construction Code of Australia).

Note 2

Provided protection against sewerage surcharge has been made as specified in Clause 4.6.6, any additional gully may have a lesser separation than that specified in Clause 4.6.6.

Figure 1: Example of an installation in accordance with AS/NZS 3500.2:2015, section 14



Notes

The technical note series is issued by the Plumbers Licensing Board to assist the plumbing industry to comply with the Plumbers Licensing and Plumbing Standards Regulations 2000 applicable to plumbing work in Western Australia.

Each technical note is to be read in conjunction with Part 6 of the Regulations that currently adopt the Plumbing Code of Australia (PCA) and the deemed to satisfy provisions of AS/NZS 3500:2015 Parts 1, 2 and 4 but modified in certain matters to suit the State's building approach and other local conditions.

Feedback

The Plumbers Licensing Board welcomes your feedback. If you have any questions on this technical note or any suggestions on any areas of plumbing work that the technical notes should cover, please contact the Board's Senior Technical Officer on (08) 6251 1377.

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