



TECHNICAL NOTES

Technical Advice Line 1300 360 897

Multi-Unit Development

For the purpose of this Technical Bulletin, a "Multi-Unit Development" is defined as a development of three (3) or more residential buildings limited to three (3) storeys in height.

In Multi-Unit Developments, the main lines of sanitary drains for up to 19 residential buildings are constructed to the National Plumbing and Drainage Standard AS/NZS 3500. The main lines of water and sanitary drains are owned and maintained by a body corporate/property owner and have also, in most cases, one connection to the Service Provider's infrastructure (for example the Water Corporation's system).

Multi-Unit Developments can vary from three (3) 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 of these problems may be:

DRAINAGE

- Difficulty in accessing and clearing sewer blockages.

- Lack of provision for overflow relief if the service providers main line 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.

With the introduction of AS/NZS 3500.2:2003 it has become evident that some operatives in the industry are not aware of Section 12 of this standard, which affects Multi-Unit Developments. No longer can these developments of three (3) or more class one dwellings proceed under the old system of sanitary drainage design as Clause 12.2.1 now requires the provision of an inspection shaft, an overflow relief gully and an open upstream vent on each unit or individual allotment.

In the past plumbers have been able to install sanitary drainage in a manner which did not require the provision of individual inspection shafts, overflow relief gullies or open upstream vents on each unit (see figure1).

Example of installation without individual inspection shafts, overflow relief gullies or open upstream vents.

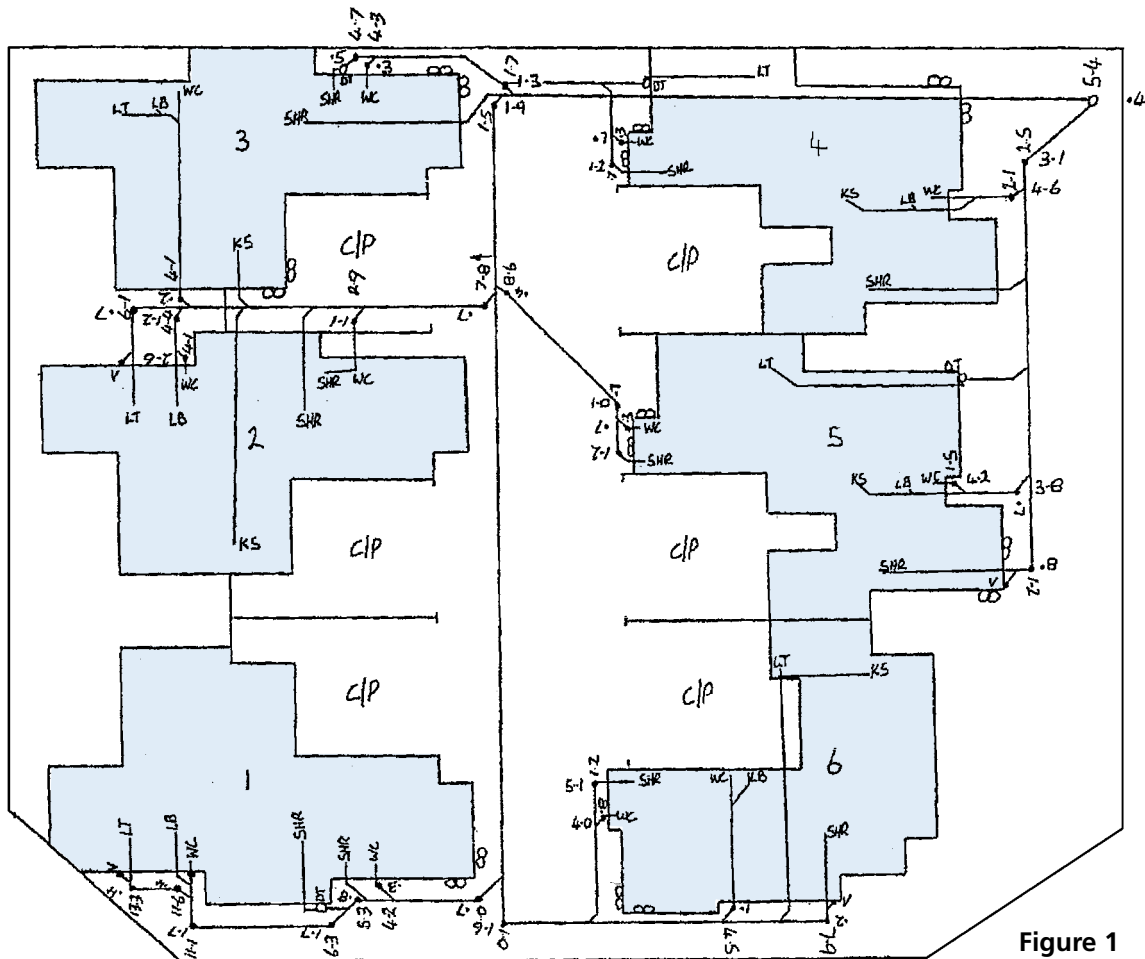


Figure 2 provides an alternative to fig 1 to help comply with this new Clause.

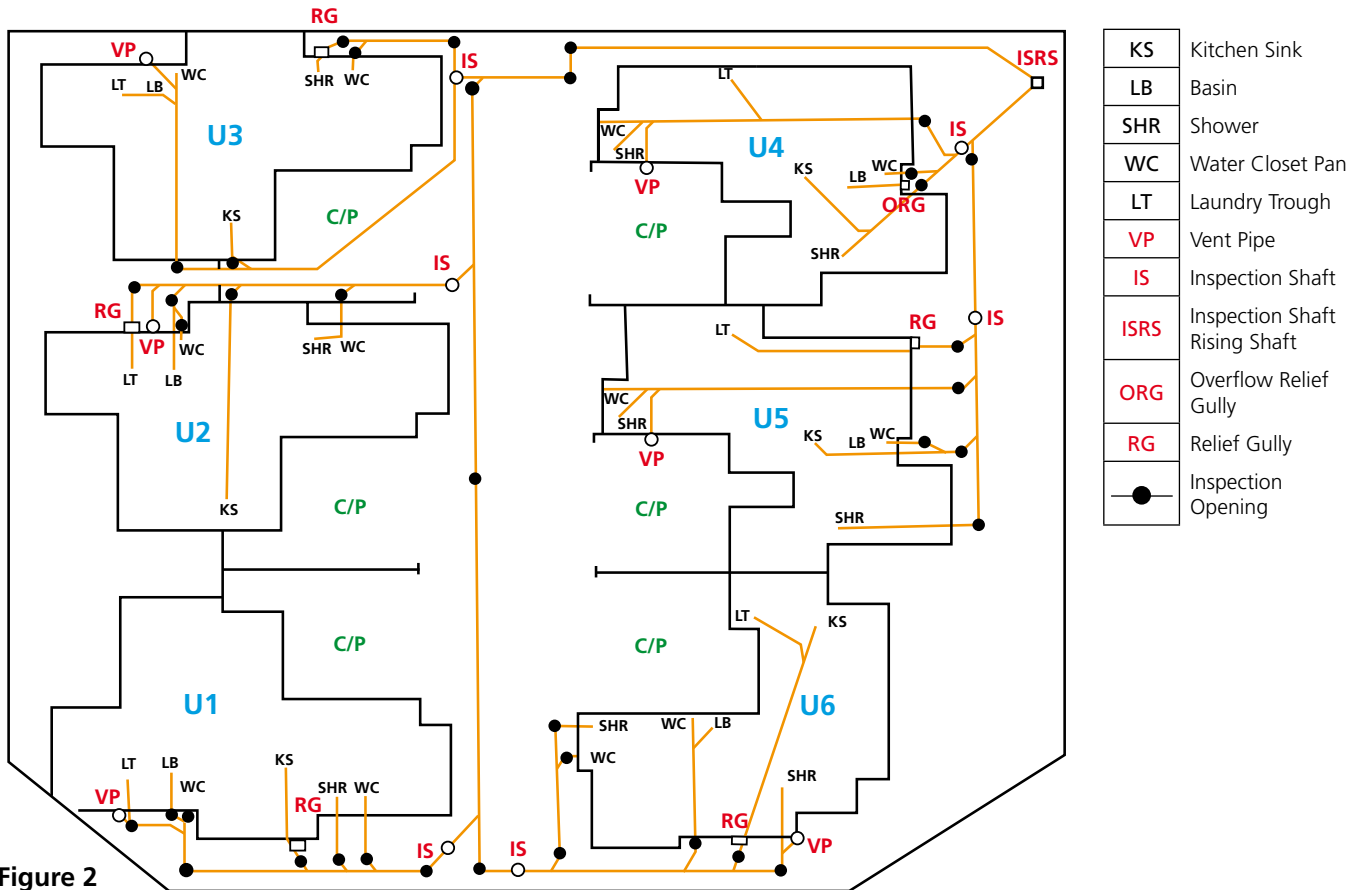


Figure 2

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 Building 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.

During the design phase of any Multi-Unit Developments, Contractors now need to make provision in the sanitary drains for these new plumbing standards, by making sure Multi Unit Developments of three (3) or more residential buildings have provision at each individual residential building or allotment for the following.

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 12.2.2 states: in Multi-Unit Developments of 20 or more residential buildings, a maintenance shaft having ready access at ground surface for drain clearing equipment and television inspection shall be provided on the main lines of the sanitary drainage system, 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.

Multi-Unit Developments of 20 or more residential buildings shall comply with either this Standard or the Sewerage Code of Australia. This means that Multi Unit Developments of 20 or more residential buildings can be designed using either the AS/NZS 3500:2003 or the Sewerage Code of Australia.

As well as the new sanitary drainage requirements, Part 1 of AS/NZS 3500 has also seen the introduction of Section 15. This Section specifies the minimum requirements for main lines of water services located within common property of a Multi-Unit Development of 20 or more residential buildings up to three (3) storeys in height. Therefore, it must be remembered that Multi-Unit Developments of this magnitude will need to have the water services complying with AS/NZS 3500.1:2003 Section 15.