Plumbers, Gasfitters and Drainlayers Board

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Drainage information sheet No. 8

Drainage Overflow Relief

Aim

The aim of this information sheet is to clarify issues associated with the provision of overflow relief for protection against sewer discharge.

G13 – Foul Water

NZBC G13 provide the mandatory, objective and functional and performance requirements for foul water in NZ. G13 cites AS/NZS 3500.2, Sections 1-13, 15, (and 16, as modified by paragraph G13/AS3 2.0.2) an Acceptable Solution for plumbing and drainage.

Warning – Failure to have adequate overflow relief can result in sewage discharge entering into buildings!

G13/AS2 3.3.2 outlines that:

In order to provide overflow relief for the drainage system, every building used for Housing shall be provided with at least one gully trap, which shall:

1. Be positioned so that the top of the gully dish is no less than 150mm below the overflow level of the lowest sanitary fixture served by the drainage system,
2. Have a grating that will allow surcharge,
3. Be located in a visible position, and
4. Be installed so that surcharge cannot enter into or under buildings.

To prevent ingress of any surface water G13/AS2 outlines that gully dishes shall be:

- 25mm above a paved surface; and
- 100mm above an unpaved surface

Often the work of other tradespeople affects the surface level around the gully dish. To avoid non-compliance it is important that the drainlayer responsible communicates the required levels to others whose work may affect the surface level around the gully (e.g. builders, designers and landscapers).

G13/AS2 outlines that waste pipes entering an ORG shall be located at least:

20mm above the water seal level; and

20mm below the grating.

Under G13/AS2 an Overflow Relief Gully (ORG) shall have an outlet of not less than 100mm.

AS/3500.2 Plumbing and drainage - Sanitary plumbing and drainage

Where, G13/AS2 requires an ORG. Under section 4.6.6.2 of AS/NZS 3500.2 there are some situations where an ORG may be omitted such as:

1. the drain serves fixtures in a toilet block or an amenities building and is located in a park or reserve, provided the floor level of the building is graded to fall towards the external doorway;
2. the site is entirely built on and it is not possible to locate the gully in any of the alternative locations specified in Clause 4.6.6.5, and the fixtures on the ground floor discharge through a reflux valve to the sewer by gravitation;
3. the lowest fixtures connected are located on floor levels 3m or more above ground surface level at the point of connection to the sewer; or
4. an alternative overflow relief point(s), equal to or the equivalent cross-section area of the drain served, is provided to the drainage systems.

Note: G13/AS3 modifies clause 4.6.6 of AS/NZS 3500.2 to only apply to housing.

While it is a good idea and recommended that other types of buildings have at least one ORG, it may not always be mandatory.

Conclusion

Several factors need to be considered when installing an ORG in a way that prevents waste entering a building should a blockage occur. However, to get this right communication is required among tradespeople and designers.

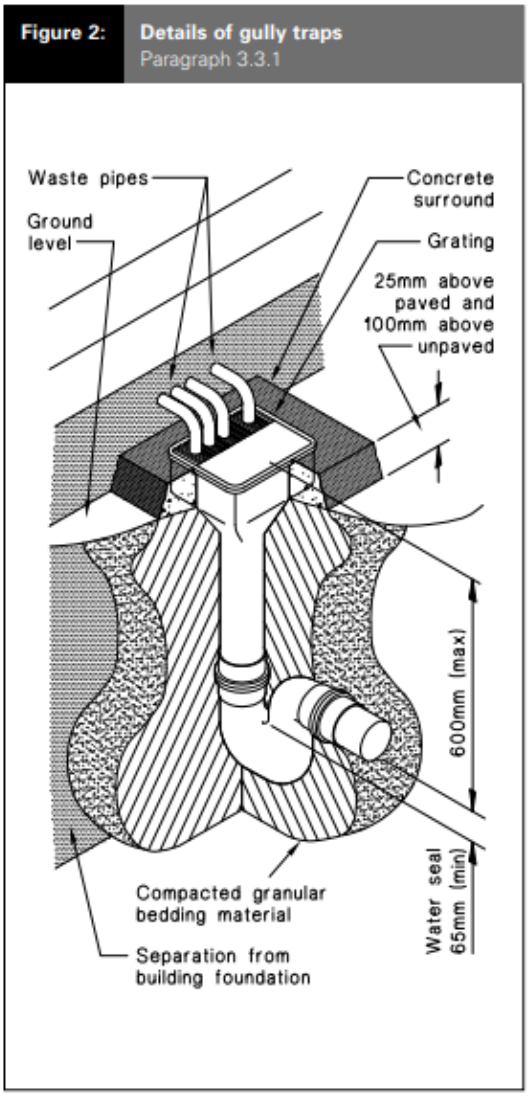


Figure 2 of G13/AS2 provides design details of gully traps.