

Acceptable bedding materials for drains

NZBC B1 requires that all drains be constructed to withstand the combination of loads that they are likely to experience throughout their lives. In addition, NZBC B1 requires that account shall be taken of physical conditions such as:

- Imposed gravity and loads
- Earth pressure
- Differential movement

Part of allowing for meeting the requirements of NZBC B1 is to install appropriate bedding. Pea-metal is a common way of bedding drains as it self-compacts; however, it is not the only way. The acceptable solutions allow for several types of bedding for drains.

For example, G13/AS1 outlines that for foul water drains:

2.1.1 Fill materials, as shown in Figure 7, shall be:

a) Bedding material of clean granular non-cohesive material with a maximum particle size of 20 mm,

In addition to G13/AS1, AS/NZS 3500.2, 5.4.2 (Cited in G13/AS3) outlines that the following is suitable for bedding foul water drains:

- Crushed rock, gravel screenings or similar recycled materials of nominal sized of 7-10mm.
- Cement mortar containing 1 part of Portland cement to 4 parts of sand by volume, thoroughly mixed with clean water to a workable consistency.
- Free-running sand capable of passing through a 2mm mesh sieve, which does not contain clay, organic or any other deleterious materials.

For stormwater drains, E1/AS1 outlines that:

3.9.5 Acceptable fill materials shown in Figure 13 are:

a) Bedding material of clean granular non-cohesive material with a maximum particle size of 20 mm, or

As well as having the appropriate bedding, it is important that the bedding be installed correctly. When installing the bedding it is important to make sure there is the right amount and that it is adequately compacted (some bedding will require more work to compact than other types). This will help ensure that drains are adequately supported which will help prevent damage to the drain.