



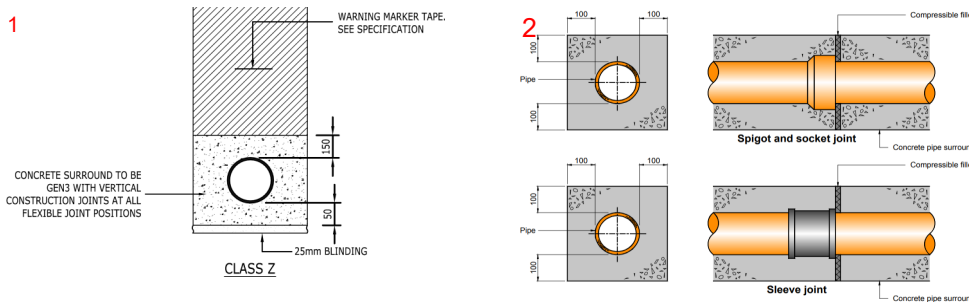
Quality Alert

Concrete pipe bed & surround



The drainage installation above has a number of inherent issue.

1. Congestion: the design should have been reviewed, to achieve better spacing between the manholes and pipe runs.
 2. The joint collars are the same off-set restricting the alignment into the manhole and separation between runs, there is also an increase in directional and gradient change.
 3. Missed compressible board to various locations.
 4. No separation between the concrete bed & surround to each pipe runs or a compressible board separation longitudinally.
- ◆ The intention if the compressible joint, is to allow the movement between the collar and pipe when ground level surcharge take place, when trafficked and or the water table rises increasing the ground loading.
 - ◆ The compressible board in a trench situation has to bridge the full width and height of the concrete placed . As noted in item 4 the compressible board has to form a complete break through the concrete. See drawing 1&2.
 - ◆ You will notice that different concrete depth and width are noted on the drawings below this depends on the load calculations that may be incurred.
 - ◆ Reference to note 2 above, the standards state: Access points should be built in at every change of alignment and gradient. Reviewing photo A above to comply with the standards would be unachievable due to the size of the area. Therefore the pipe runs need to a continuous gradient and alignment, which will limit any potential blockages.



The Highways specification is the main document that contains within it the requirement for drainage. The approved document H contains all the British Standards references.

Drainage design is in accordance with the above. Sewers for adoption 7th edition is a described and pictorial document that relates to the above named documents and is generally what you see in most of the Civils drawings private site have some differences but generally are based on the same principals.

This advice should be used, where the above is applicable, and the information discussed with your team highlighting the following points:

- Drainage design should be checked against the standards they are based on.
- Review the drawing with the contractor and engineer for feasibility and what can be achieved in accordance with the design and standards.
- Ensuring the ITP is site specific with the hold and inspection check sheets and have the correct question criteria that meet the standards required.



Everyone has the right to be

100% Safe