



02.7.2 - The hydraulic design of pipe size shall be based on the Colebrook-White formula using the charts for roughness coefficient K.

Reinforced Concrete Pipe.....K = 0.6

UPVC Plastic.....K = 0.015

Clay.....K = 0.15

02.7.3 - The maximum and minimum velocity for full pipe flow shall be 4.5 m/s and 0.75 m/s respectively.

02.7.4 - The pipe sizes shall have a minimum capacity designed for a storm event of average recurrence interval as outlined in 02.2.3.

02.7.5 - The pipe types and classes must comply with the following requirements:

- a) Low density residential must be in accordance with "*AS1254:2010 PVC-U Pipes and Fittings for Stormwater and Surface Water Applications*"
- b) Commercial, industrial, medium and high density residential applications must be in accordance with "*AS1260:2009 - PVC-U Pipes and Fittings for Drain, Waste and Vent Applications.*"

02.7.6 - The minimum pipe class to be used is:

- a) Steel reinforced concrete pipe, *Class 2*
- b) Fibre reinforced concrete pipe, *Class 4*
- c) Precast reinforced concrete pipe, Complying with *AS4058:2007*
- d) U.V. plasticised polyvinyl chloride (UPVC) for roof drainage and sewer, *Class SN6*
- e) Flexible stormwater pipe, *Class SN8 (AS5065:2005)*

Alternative pipe material subject to satisfactory demonstration that the proposed alternative material will meet the performance requirements with regard to the design, installation and maintenance for the design life.

02.7.7 - Depth of Cover to Pipes:

- a) Minimum pipe cover for polyvinyl chloride (PVC) pipelines vary for different locations and loadings. Minimum cover is set out in the technical manual and must be in accordance with "*AS2032:2006 - Installation of PVC Pipe Systems.*"
- b) Pipe bedding and cover requirements for steel reinforced concrete pipe (RCP) or fibre reinforced concrete pipe (Fibre RCP) shall be determined from the Concrete Pipe Association or "*AS3725:1989 - Loads on buried Concrete Pipes.*"

The required bedding and minimum cover to pipes shall be in accordance with the manufacturer's recommendations.

02.7.8 - The minimum pipe size for the main drainage system shall be 300mm in diameter.

02.7.9 - Pipe diameters along a main drain shall not decrease in the downstream direction irrespective of steeper grades.