03.2.3 - The maximum allowable length of pipes between manholes shall not exceed 90 metres for pipes ranging from 225mm to 600mm in diameter. For pipe sizes greater than 600mm diameter, it is preferable to limit the maximum length of pipes between manholes to 120m.

03.2.4 - Placement of manholes and access chambers:

a) Placement of a manhole/access chamber in a carriageway with a paved surface should be level with the finished surface. When a manhole/access chamber is located within the carriageway, the chamber top, or access point, should be positioned to avoid wheel paths.
b) Elsewhere, access chambers should be finished 25mm above the natural surface level with the topsoil or grassed surface around the chamber graded gently away.

03.2.5 - Change in direction of Large Pipes.
Changes of direction for drainage lines of 1200mm or greater may be achieved by deflection of pipe joints, the use of splayed joints or fabricated bends.

03.3 - Gully Pits

03.3.1 - Gully pits shall be located to capture stormwater runoff in order:

a) to limit the inconvenience caused to pedestrians by the gutter flow;
b) to reduce traffic hazards and flood damage to adjacent properties;
c) to restrict the typical gutter flow width to 1.0m where possible, if not max 1.5m.
d) to restrict the gutter flow width at bus stops and pedestrian crossings to maximum 450mm.
e) to restrict the gutter flow width at intersections and kerb returns to max 1.0m.

03.3.2 - An example of the preferred approach to locating pits is given in Book 8, Technical Note 2 of *ARR 1997*.

03.3.3 - All gully pits shall be trapped to minimise sand and other debris deposits in the pipe network.

03.3.4 - Complete reliance should not be placed on the capture of stormwater runoff by any one gully pit because of the possibility of blockage by debris.

03.3.5 - For the safety of cyclists, gully grates shall have bars placed transversely to the direction of flow or installation of a cycle safe gully grate.