

7. PUMPING MAIN DESIGN

7.1. Introduction

The required layout of all pressure mains will depend on local circumstances. The Consultant shall demonstrate due consideration of the factors in Table 7-1 in the design of pumping main.

Pumping Main Design Factors	
1	Reliability of supply
2	Good access for maintenance
3	Provision and location of line valves, air valves, washouts and flow meters
4	Adverse ground conditions and difficult terrain, road levels
5	Risk of damage to and from trees, tree roots and other utilities.
6	Pipe materials and corrosion protection systems in aggressive / contaminated soils and other utilities
7	Minimum gradient is 1:500 as per the recommendation of BS EN 805
8	Utility corridors
9	Crossing of roads and railways to be 90 degrees
10	Adoption of shortest practical route
11	Location of other services, buildings and structures
12	Telemetry, control and metering
13	All design pressures
14	Earth loads
15	Traffic loads
16	Ease of operation and maintenance
17	National and local planning, environmental protection
18	Risk of damage to and from other utilities, works and apparatus
19	For buried pipes the minimum depth of cover
20	The maximum depth of cover for ease of repair

Table 7-1 - Pumping Main Design Factors