1. Ground or roadway surface above the pipe centerline 3mm (unless the Roads Authorities requirement is more stringent).
2. Adjacent structures 3mm.

1.3.9 Drilling Fluid Tests

Control tests on the bentonite suspension shall be carried out using suitable apparatus. The density of freshly mixed bentonite suspension shall be measured daily as a check on the quality of the suspension being formed. The measuring device shall be calibrated to read to within 0.005 g/ml. Tests to determine density, viscosity, shear strength and pH value shall be applied to bentonite supplied to the pipe bore. For average soil conditions the results shall generally be within the ranges in Table 1-1 below.

Table 1-1: Bentonite Suspension Properties

Property	Test Method	Range of Results
Density	Mud density balance	Less than 1.10g/ml
Viscosity	Marsh cone method Fan viscometer	30 to 90s less than 0.020Pa-s
Shear strength 10 minute gel strength	Shear meter Fan viscometer	1.4 to 10Pa 4 to 40Pa
pH	pH indicator paper strips or electrical pH meter	9.5 to 12

Notes to Table 1-1

1) Where the Fan viscometer is specified, the fluid sample should be screened by a 300 µm sieve before testing.

2) The Contractor shall propose the frequency of testing bentonite slurry and the method and procedure of sampling for approval before the commencement of work. The frequency may subsequently be varied as required, depending on the consistency of the results obtained, subject to approval.

3) Carry out tests until a consistent working pattern has been established, account being taken of the mixing process, any blending of freshly mixed