1. Bleeding in accordance with ASTM C232 (non-vibrating) shall not exceed 0.5%.
2. Drying shrinkage in accordance with BS 812 Part 120.
3. Air content if applicable BS 1881 Part 106.
4. Free water/cement ratio.
5. Workability tests BS 1881 Part 102, 103, 104 and 105.
6. Fresh and hardened concrete densities BS 1881 Parts 107 and 114 respectively.
7. Compressive strength BS 1881 Part 116. The CCS of the concrete shall be determined on test specimens obtained and prepared in accordance with BS 1881 Part 108.
8. Tensile strength BS 1881 Part 118.
9. Water Permeability DIN 1048.
10. Water absorption BS 1881 Part 122.
11. Initial surface absorption BS 1881 Part 5.
12. Chloride Permeability to AASHTO T277.
13. Chloride and sulphate levels to BS 1881 Part 124.
14. Coefficient of linear expansion to US Army Corps of Engineers CRD-C 39-81.
15. Heat of hydration BS 8110-97 Part 1 clause 6.2.4.2 – Point (d).
16. Other tests as dictated by concrete performance requirements or directed by the Engineer.

C. If the values obtained do not comply with the Specification or are not to the full satisfaction of the Engineer then the mixes shall be re-designed.

D. Before commencement of concreting approved trial mixes shall be prepared under full-scale site conditions and tested in accordance with the relevant standards.

E. Three trial batches of each mix shall be made and from each batch, a minimum of 6 cubes shall be tested for strength. Three cubes shall be tested at 7 days and three cubes at 28 days by a laboratory approved by the Engineer. The results shall be submitted to the Engineer within 24 hours of testing. Additional cubes shall be required as instructed by the Engineer for durability testing.

F. Further trial mixes shall be made if the range (the maximum minus the minimum of