

APPENDIX G
DETAILS OF RESEARCH WORKS

Concrete Properties	Test Type	Standards	Testing Age (Days)	Sample Size	No. of Samples	Measurement Units
A. PHYSICAL PROPERTIES OF AGGREGATES	Sieve Analysis	BS 882: 1992	None	Gravels (20mm)	each series	% passing
		BS 812-103:1985		Sand		
		BS 812-103.2:1989				
B. PHYSICAL PROPERTIES OF OPC & SF	XRF	None	28	powdered	one	%
	XRD	None	28	powdered	one	%
C. FRESH CONCRETE	Slump Test	BS EN 12350-2:2000	Fresh Concrete	None	each series & types	mm
	Mixing & Sampling	BS 1881-125:1986	Fresh Concrete		each series & types	
	Compressive Strength	BS EN 12390-3:2002 BS 1881-116:1983	3,7,28,56,120	150 mm ³	3 cubes/mix/age	MPa
D. HARDENED CONCRETE	Porosity	Shafiq et.al (2007)	3,7,28,56,120	40 mm ϕ , 5 mm	3 cores/mix/age	%
	Tensile Strength	BS EN 12390-6:2002 ASTM C39-86: 1986	28,180	Cylinders 100 mm ϕ , 200 mm	2 cylinders/mix/age	MPa
	Chloride Migration	Shafiq et.al (2007)	28,120,180	100 mm ³ cubes	4 parts/cube/mix	mm, %
	Modulus of Elasticity	ASTM C469-02el: 1986 BS 1881-209: 1990 BS 1881-118:1989 BS 1881-121:1983 BS 1881-109:1989	28,180	Beams 500 x 100 x 100 mm	2 beams/mix/age	GPa