BS 1377 : Part 5 : 1990

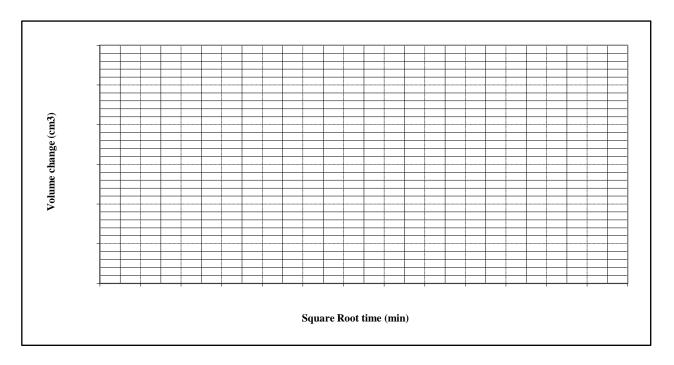
Triaxial Saturation				
Location			Job ref.	
			Borehole/P	it no.
Soil description	Sample No			
			Depth	m
			Date	
Test method BS1377: P	art 8: 1990 <b>C</b>	Clauses 5.3/5.4*	•	
Consolidated-undrained/consolidated-dr	ained*triaxial co	mpression test		
With/without*side drains	Date st	arted	Completed	
Pressure system no.	Cell no	).		
Required effective pressure σ3	kPa	Initial diamete	er D <sub>o</sub> mm	
Cell pressure σ3	kPa	Initial length	L <sub>o</sub> mm	
Back pressure u <sub>b</sub>	kPa	Initial area	$A_{o}$ mm <sup>2</sup>	2
Pore pressure after build-up u <sub>i</sub>	kPa	Initial volume	$V_o$ cm <sup>3</sup>	
Excess pore pressure $(u_i - u_b)$	kPa			

Consolidation data

Date Time Elapsed time t(min)		/t	Volume change indicator		Pore pressure			
		Reading	Difference	Reading	Difference	Dissipation		
						u	(u <sub>i</sub> - u)	U
				mL	mL		kPa	%

Final difference =

total consolidation volume change DVc



After consolidated							
Consolidated volume $V_c = V_o$ -	$\Delta V_{c}$	cm3			Coeffiecier	nt of volume	
Volumetric strain $\epsilon_{\rm v} = \Delta V_{\rm c}$				Compressi			
	$V_{o}$				$m_{vi} =$	<u>1000εν</u>	
Consolidated length $L_c = L_o(1$	- $1/3 \epsilon_{\rm v}$ )	mm				$(u_i - u_c)$	
Consolidated area $A_c = A_o(1$	$-2/3 \epsilon_{\rm v}$	mm2			$m_{vi} =$		$m^2/MN$
Value of λ	Value of F		Coefficient of			nt of	
From graph / t <sub>100</sub>	t <sub>100</sub> =			min Consolidation			
Significant testing time	$t_f = Ft_{100}$	1.0		min	$c_{vi} =$	$\frac{2.1 \text{ A}_{c}}{\lambda t_{100}}$	m²/year
Significant strain : assumed failure/reading intervals* $\varepsilon f =$							
Calculated rate of axial displacem	nent	$d_r =$	$\underline{\epsilon_{\rm f} L_{\rm c}}$				mm/min
			$t_{\rm f}$				
Selected machine speed							mm/min
				Ope	erator	Checked	Approved
*Delete as appropriate				-			

Form 8C