3/2012/0423

BS1377 : Part 6 : Clause 6 :1990

Determination of Permeability in a Triaxial Cell

Borehole / TP:	Description:
Sample No: 5612C	Stiff dark red brown slightly sandy slightly gravelly CLAY
Depth:	

SPECIMEN DETAILS

Depth within original sample	
Orientation within original	Vertical
Specimen preparation	Undisturbed

TEST DETAILS

Cell Preparation: Performed in accordance with Clause 3.5

		INITIAL	FINAL
Diameter	*mm*	96 8	95 6
Height	*mm*	100 0	98 9
Moisture Content	*%*	20	22
Bulk Density	*Mg/m³*	2 05	2 16
Dry Density	*Mg/m³*	1 71	1.77

SATURATION STAGE

Saturation initially by constant moisture content, followed by back-pressure assistance using 5-10 kPa differential

'B' value	0.70	1.00

CONSOLIDATION STAGE

Effective pressure	*kPa*	100
Volume change	*mL*	25 5

PERMEABILITY STAGE

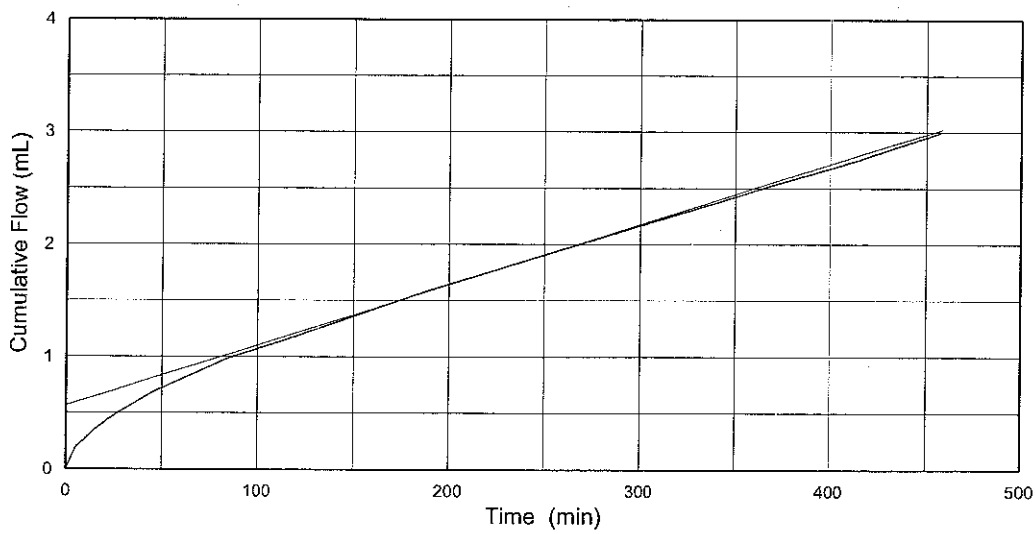
Pressure difference across specimen		50
Mean effective stress	*kPa*	75

Coefficient of permeability at 20°C = 2.4×10^{-10} m/s

Hydraulic Gradient : 51.6

TEST DURATIONS

Saturation	*days*	4
Consolidation	*days*	1
Flow	*days*	1



Checked and Approved Initials: PTH Date: 29/06/12	Project Number: GEO / 18455 Project Name: SLURRY LAGOON	UKAS TESTING 1982 GEOLABS®

BS1377 : Part 6 : Clause 6 :1990

Determination of Permeability in a Triaxial Cell

Borehole / TP:	Description:
Sample No: 5612B	Stiff dark red brown slightly sandy slightly gravelly CLAY
Depth:	

SPECIMEN DETAILS

Depth within original sample	
Orientation within original	Vertical
Specimen preparation	Undisturbed

TEST DETAILS

Cell Preparation — Performed in accordance with Clause 3 5

		INITIAL	FINAL
Diameter	*mm*	97 9	96 9
Height	*mm*	93 4	92 5
Moisture Content	*%*	18	20
Bulk Density	*Mg/m³*	2 05	2 15
Dry Density	*Mg/m³*	1.74	1 79

SATURATION STAGE

Saturation initially by constant moisture content, followed by back-pressure assistance using 5-10 kPa differential

B value	0 68	1.00

CONSOLIDATION STAGE

Effective pressure	*kPa*	100
Volume change	*mL*	20.7

PERMEABILITY STAGE

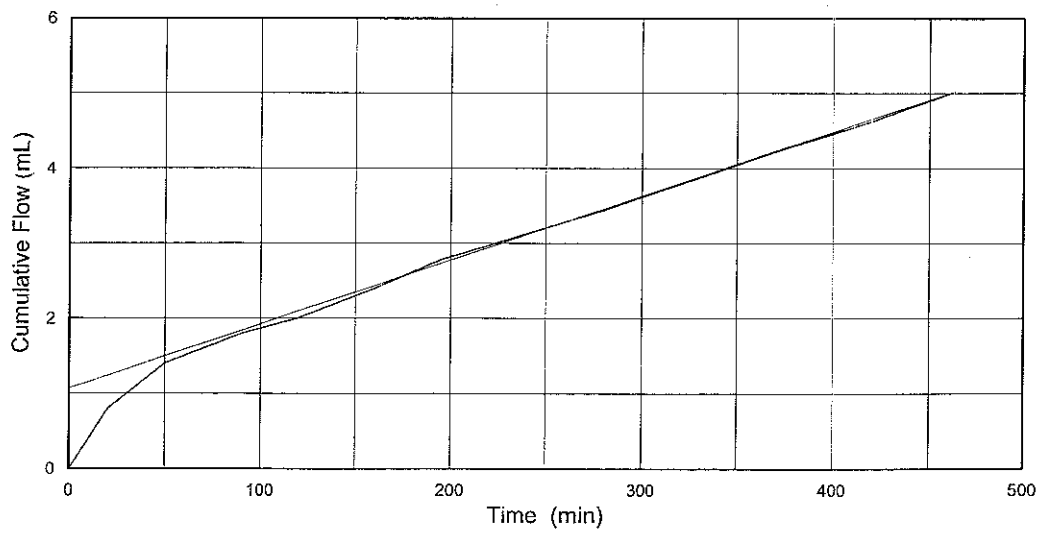
Pressure difference across specimen		50
Mean effective stress	*kPa*	75

Coefficient of permeability at 20°C = 3.5×10^{-10} m/s

TEST DURATIONS

Saturation	*days*	4
Consolidation	*days*	1
Flow	*days*	1

Hydraulic Gradient : 55 1



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BS1377 : Part 6 : Clause 6 :1990

Determination of Permeability in a Triaxial Cell

Borehole / TP:	Description:
Sample No: 5612A	Stiff dark brown slightly sandy slightly gravelly CLAY
Depth:	

SPECIMEN DETAILS

Depth within original sample	
Orientation within original	Vertical
Specimen preparation	Undisturbed

TEST DETAILS

Cell Preparation — Performed in accordance with Clause 3 5

		INITIAL	FINAL
Diameter	*mm*	98.0	97 1
Height	*mm*	93 9	93 0
Moisture Content	*%*	14	18
Bulk Density	*Mg/m³*	2 08	2 21
Dry Density	*Mg/m³*	1.82	1 88

SATURATION STAGE

Saturation initially by constant moisture content, followed by back-pressure assistance using 5-10 kPa differential

'B' value	0 54	1.00

CONSOLIDATION STAGE

Effective pressure	*kPa*	100
Volume change	*mL*	21.2

PERMEABILITY STAGE

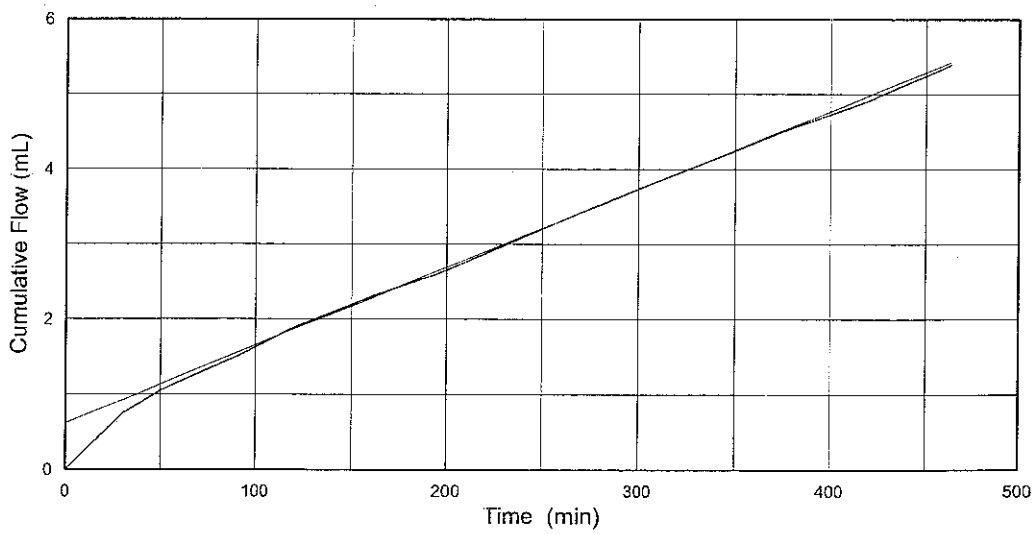
Pressure difference across specimen		50
Mean effective stress	*kPa*	75

Coefficient of permeability at 20°C = 4.3×10^{-10} m/s

Hydraulic Gradient : 54.8

TEST DURATIONS

Saturation	*days*	4
Consolidation	*days*	1
Flow	*days*	1



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16/7/12

TO LAGOON CONSTRUCTED AT WITHGILL FARM APRIL 2012

I CONFIRM THAT THE CLAY LINING WAS ENGINEERED TO A 1 METRE DEPTH ACROSS THE SITE AT TIME OF CONSTRUCTION.

DAVID WALLBANK
ON BEHALF OF D & D WALLBANK CONTRACTORS LTD