TERRA TEK
SITE INVESTIGATION & LABORATORY SERVICES

White Rock GeoEnvironmental Ltd.
597 Walsall Road,
Great Wyrley
Staffs.
WS6 6AE

For the attention of Mr. S. LeLuan

Report No: C5915
Issue No 03

LABORATORY TEST REPORT

Project Name	**PARRYS QUARRY, SOURCE 1 - CELL 1**		
Project Number	**C5915**	Date samples received	22/11/2016
Your Ref		Date written instructions received	22/11/2016
Purchase Order	PO_014_.03_Cell 1_TerraTek	Date testing commenced	21/12/2016

Please find enclosed the results as summarised below

Item No	Test Quantity	Description	ISO 17025 Accredited
6.31	4	Triaxial permeability	Yes

Remarks : This completes the testing for this project.

Issued by : L. Anaz Date of Issue : 26/01/2017

Approved Signatories : L. A. 26/01/2017

G Wilson (JMD/Laboratories Director), M D Brown (Quality Manager), L Anaz (Supervisor), Julie Hopkins (Administrator), A Davison (Supervisor)

Key to symbols used in this report
S/C : Testing was sub-contracted

Unless we are notified to the contrary, samples will be disposed after a period of one month from this date.
The results reported relate to samples received in the laboratory only.
All results contained in this report are provisional unless signed by an approved signatory
This report should not be reproduced except in full without the written approval of the laboratory.
Under multisite accreditation the testing contained in this report may have been performed at another Terra Tek laboratory.
The enclosed results remain the property of Terra Tek Limited and we reserve the right to withdraw
our report if we have not received cleared funds in accordance with our standard terms and conditions
Only those results indicated in this report are UKAS accredited and any opinions or interpretations expressed are outside the scope of UKAS accreditation.
Feedback on the this report may be left via our website www.terratek.co.uk/contact-us

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME
UKAS TESTING 0126
25 YEARS 1990-2015

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Terra Tek Ltd is registered in Scotland No. 121594
Offices in Airdrie, Birmingham, Belfast and Chesham
Head Office : 62 Rochsolloch Road, Airdrie, ML6 9BG

TERRA TEK Site Investigation & Laboratory Services	Site: PARRYS QUARRY, SOURCE 1 - CELL 1	Contract No. C5915
	Client: White Rock Geo-environmental Limited	Hole ID
	Engineer	Sample P4/L1/16P
		Depth (m)
		Sample Type C

Non Engineering Description: Reddish brown sandy very gravelly CLAY. Gravel is fine to coarse.

Sample Details:	Initial:	Final:
Diameter:	98.2 mm	97.2 mm
Height:	129.3 mm	128.0 mm
Moisture content:	16 %	14 %
Bulk density:	2.23 Mg/m³	2.27 Mg/m³
Dry density:	1.93 Mg/m³	1.99 Mg/m³
Sample condition:	Undisturbed	

Saturation Stage:

Initial pore pressure coefficient, B:	0.88
Final pore pressure coefficient, B:	0.97
Duration of stage:	5 days

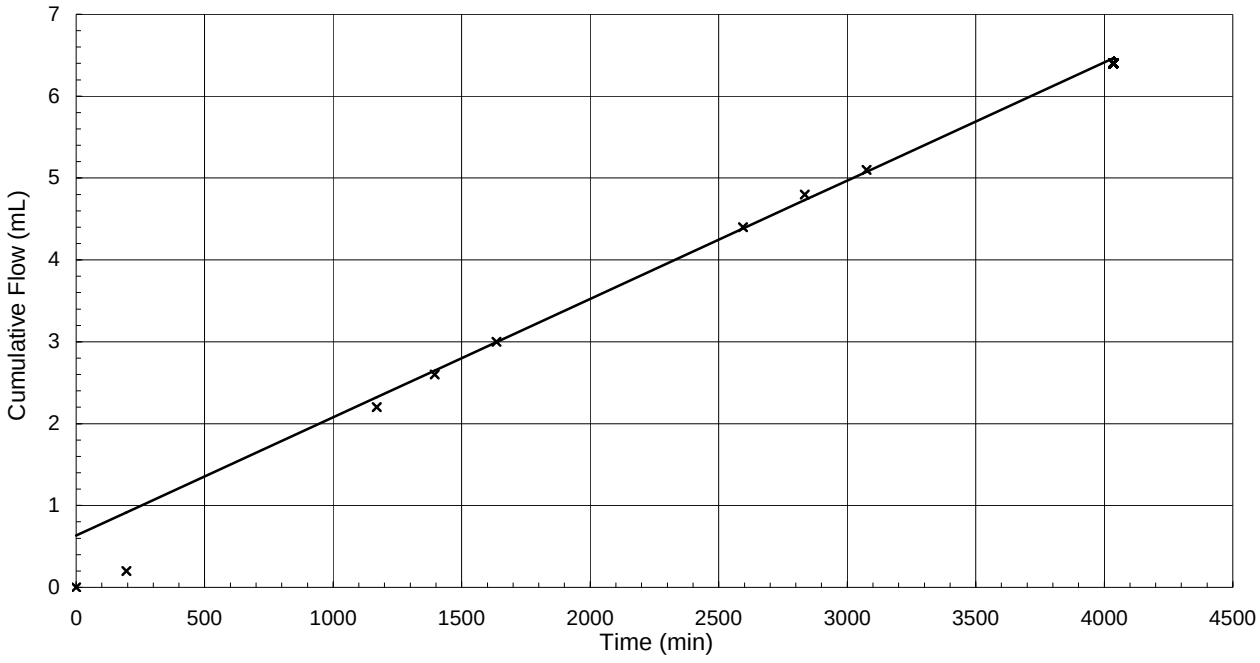
Consolidation stage:

Effective pressure:	200 kPa
Duration of stage:	5 days

Permeability stage:

Pressure difference across specimen:	20 kPa
Mean effective stress:	200 kPa
Duration of stage:	3 days

Coefficient of permeability at 20°C, Kv: 2.0×10^{-10} m/s



Originator	Checked & Approved
CL	24/01/2017

PERMEABILITY IN A TRIAXIAL CELL

BS1377 : Part 6 : Clause 6 : 1990

Permeability under constant head conditions in a triaxial cell

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TERRA TEK Site Investigation & Laboratory Services	Site	PARRYS QUARRY, SOURCE 1 - CELL 1	Contract No.	C5915
	Client	White Rock Geo-environmental Limited	Hole ID Sample Depth (m) Sample Type	 P4/L1/18P C
	Engineer			

Non Engineering Description: Reddish brown sandy very gravelly CLAY. Gravel is fine to coarse.

Sample Details:	Initial:	Final:
Diameter:	100.2 mm	99.3 mm
Height:	119.2 mm	118.1 mm
Moisture content:	14 %	13 %
Bulk density:	2.17 Mg/m³	2.21 Mg/m³
Dry density:	1.90 Mg/m³	1.95 Mg/m³
Sample condition:	Undisturbed	

Saturation Stage:

Initial pore pressure coefficient, B:	0.63
Final pore pressure coefficient, B:	0.95
Duration of stage:	6 days

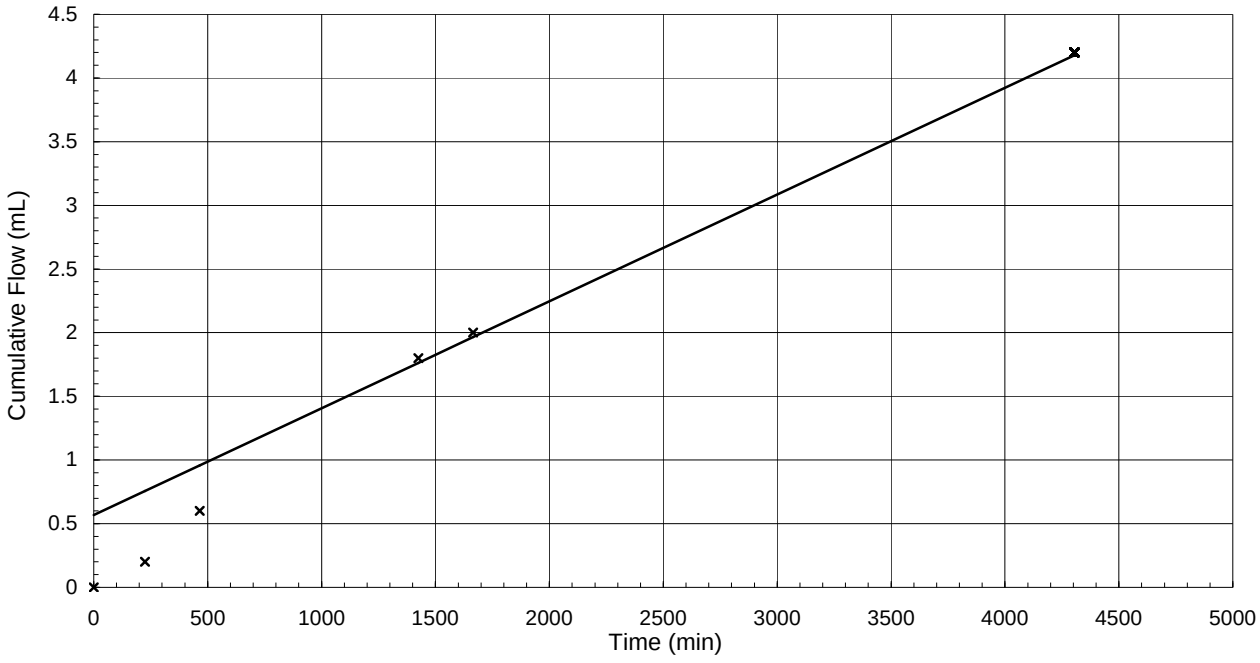
Consolidation stage:

Effective pressure:	20 kPa
Duration of stage:	4 days

Permeability stage:

Pressure difference across specimen:	200 kPa
Mean effective stress:	20 kPa
Duration of stage:	2 days

Coefficient of permeability at 20°C, Kv: 1.0×10^{-11} m/s



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TERRA TEK Site Investigation & Laboratory Services	Site: PARRYS QUARRY, SOURCE 1 - CELL 1	Contract No. C5915
	Client: White Rock Geo-environmental Limited	Hole ID
	Engineer	Sample P4/L2/20P
		Depth (m) C

Non Engineering Description: Reddish brown sandy very gravelly CLAY. Gravel is fine to coarse.

Sample Details:	Initial:	Final:
Diameter:	100.0 mm	99.0 mm
Height:	132.1 mm	130.8 mm
Moisture content:	13 %	13 %
Bulk density:	2.23 Mg/m³	2.29 Mg/m³
Dry density:	1.97 Mg/m³	2.04 Mg/m³
Sample condition:	Undisturbed	

Saturation Stage:

Initial pore pressure coefficient, B:	0.65
Final pore pressure coefficient, B:	0.99
Duration of stage:	6 days

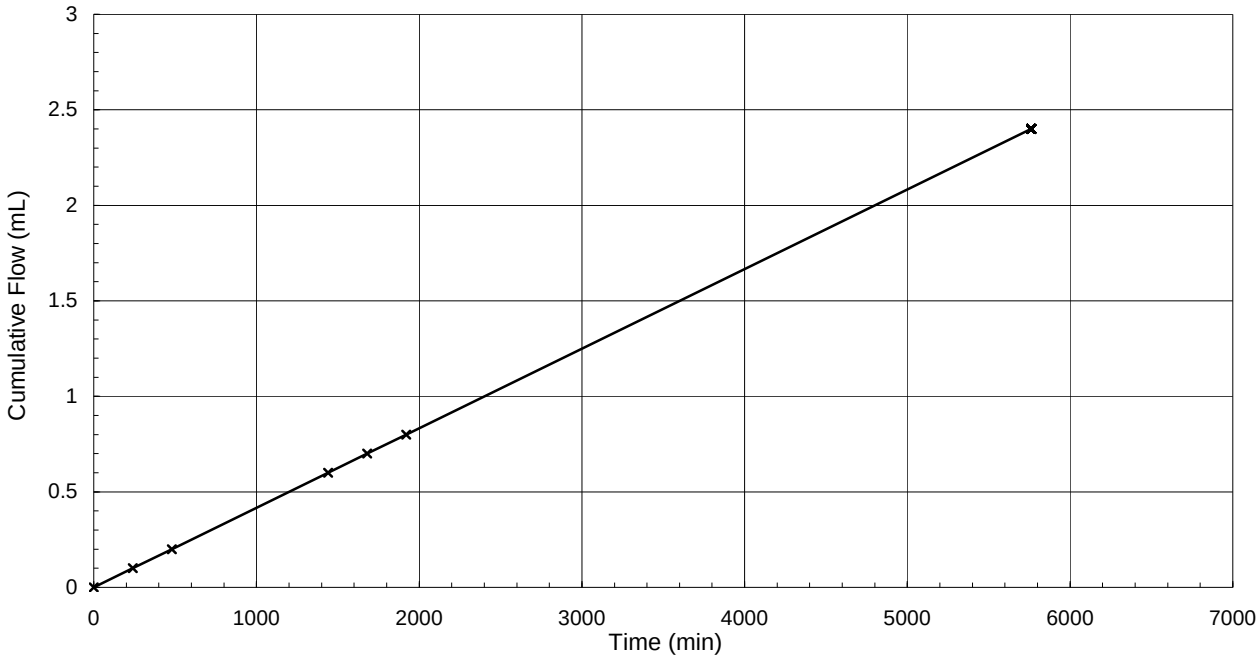
Consolidation stage:

Effective pressure:	200 kPa
Duration of stage:	4 days

Permeability stage:

Pressure difference across specimen:	20 kPa
Mean effective stress:	200 kPa
Duration of stage:	2 days

Coefficient of permeability at 20°C, Kv: 5.6×10^{-11} m/s



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TERRA TEK
Site Investigation & Laboratory Services

Site	PARRYS QUARRY, SOURCE 1 - CELL 1	**Contract No.** **C5915**
Client	White Rock Geo-environmental Limited	Hole ID
Engineer		Sample P4/L2/22P
		Depth (m) C

Non Engineering Description: Reddish brown sandy very gravelly CLAY. Gravel is fine to coarse.

Sample Details:	Initial:	Final:
Diameter:	97.0 mm	96.0 mm
Height:	131.8 mm	130.4 mm
Moisture content:	15 %	14 %
Bulk density:	2.29 Mg/m³	2.36 Mg/m³
Dry density:	2.00 Mg/m³	2.07 Mg/m³
Sample condition:	Undisturbed	

Saturation Stage:

Initial pore pressure coefficient, B:	0.56
Final pore pressure coefficient, B:	0.98
Duration of stage:	6 days

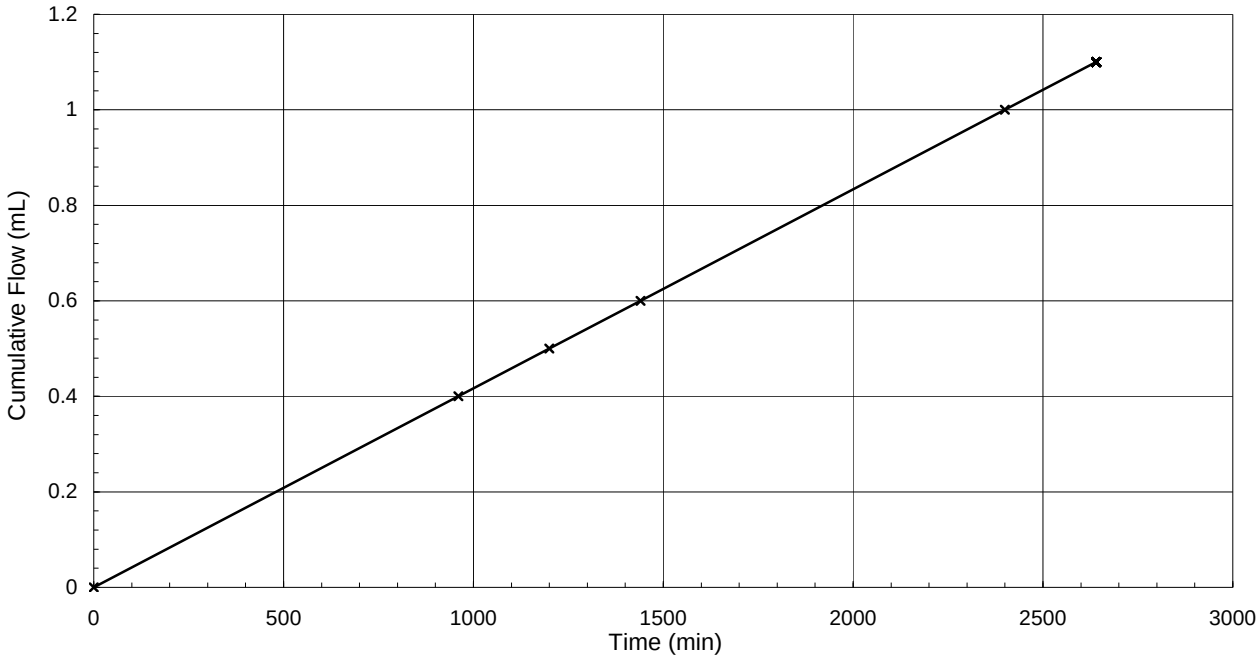
Consolidation stage:

Effective pressure:	200 kPa
Duration of stage:	3 days

Permeability stage:

Pressure difference across specimen:	20 kPa
Mean effective stress:	200 kPa
Duration of stage:	2 days

Coefficient of permeability at 20°C, Kv: 5.9×10^{-11} m/s



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