

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

BORE LOG

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER M.A. Fairhurst and Partners		LOGGED BY WS	GROUND LEVEL m.A.O.D. 761
DRILLING METHOD Hand Rig, 125mm dia. to 2.00m		START 26.2.83	COMPLETE 26.2.83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1 : 25	BORE NO. 17

LABORATORY TESTS						Soil Sample Type	Depth (m)	Inst. Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Legend	
M	BD	c	φ	LL / PL	CGS								
									Sandy TOPSOIL	0.35		[Pattern]	
						D	0.50		Stiff, brown, very sandy CLAY with gravel			[Pattern]	
20				37 / 24	CI	U	1.00						[Pattern]
						D	1.50						[Pattern]
15						D	1.70				1.65		[Pattern]
									Red, SANDSTONE	2.00		[Pattern]	

- KEY**
- N(X) - Standard Penetration Test Result
 - U - Undisturbed 100mm dia. Sample
 - B - Bulk Disturbed Sample
 - D - Small Disturbed Sample
 - W - Water Sample
 - M - Moisture Content (%)
 - BD - Bulk Density (Kg/m³)
 - c - Immediate Undrained Cohesion (kN/m²)
 - φ - Immediate Undrained Friction Angle (degree)
 - LL - Liquid Limit (%)

REMARKS

Borehole Dry

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

TRIAL PIT

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY GMB	GROUND LEVEL m.A.O.D.
EXCAVATION METHOD Excavated by a JCB 3 D11 to 2.00m		START 3.3.83	COMPLETE 3.3.83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1 : 25	TRIAL PIT NO. 14

LABORATORY TESTS							Soil Sample Type	Depth (m)	Instu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	L Level d
M	BD	C	φ	LL / PL	CGS								
17				27 18	CL	B	0.70		Sandy clayey TOPSOIL	0.30			
						B			Firm, red, very sandy, silty CLAY with gravel	1.00			
						B	1.50		Highly weathered, red, SANDSTONE	2.00			

KEY

- N(X) - Standard Penetration Test Result
- U - Undisturbed 100mm dia. Sample
- B - Bulk Disturbed Sample
- D - Small Disturbed Sample
- W - Water Sample
- M - Moisture Content (%)
- BD - Bulk Density (Kg/m³)
- C - Immediate Undrained Cohesion (kN/m²)
- φ - Immediate Undrained Friction Angle (degrees)
- LL - Liquid Limit (%)
- PL - Plastic Limit (%)

REMARKS

Trial Pit Dry

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

TRIAL PIT

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY GMcB	GROUND LEVEL m.A.O.D.
EXCAVATION METHOD Excavated by a JCB 3 D11 to 1.50m		START 3.3.83	COMPLETE 3.3.83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1 : 25	TRIAL PIT NO. 15

LABORATORY TESTS						Soil Sample Type	Depth (m)	Instu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	L. Level
M	BD	C	ϕ	LL / PL	CGS							
									Sandy, clayey, TOPSOIL, containing numerous roots and rootlets	0.50		
						B	1.00		Highly weathered, red, SANDSTONE	1.50		

KEY

- N(X) - Standard Penetration Test Result
- U - Undisturbed 100mm dia. Sample
- B - Bulk Disturbed Sample
- D - Small Disturbed Sample
- W - Water Sample
- M - Moisture Content (%)
- BD - Bulk Density (Kg/m³)
- C - Immediate Undrained Cohesion (kN/m²)
- ϕ - Immediate Undrained Friction Angle (degree)
- LL - Liquid Limit (%)
- PL - Plastic Limit (%)

REMARKS

Trial Pit Dry

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

BORE LOG

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER W.A. Fairhurst and Partners	LOGGED BY HS	GROUND LEVEL m.A.O.D.	REF. NO. 761
DRILLING METHOD Shell and Auger, 200mm dia. to 2.50m		START COMPLETE 23.2.83 23.2.83	BORE NO. 18 A
		SHEET 1 of 1	
		SCALE 1 : 25	

LABORATORY TESTS						Soil Sample Type	Depth (m)	Insitu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Lithology
M	BD	C	ϕ	LL / PL	CGS							
						D	0.50		Sandy TOPSOIL with gravel	0.50		[Pattern]
						U	1.00		Stiff reddish brown, very sandy, CLAY with gravel	1.40		[Pattern]
						U+D	1.50					
						D	2.00		Weathered, red, SANDSTONE	2.50		[Pattern]

KEY

- N(X) — Standard Penetration Test Result
- U — Undisturbed 100mm dia. Sample
- B — Bulk Disturbed Sample
- D — Small Disturbed Sample
- W — Water Sample
- M — Moisture Content (%)
- BD — Bulk Density (Kg/m³)
- C — Immediate Undrained Cohesion (kN/m²)
- ϕ — Immediate Undrained Friction Angle (degree)
- LL — Liquid Limit (%)

REMARKS

Borehole Dry

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

BORE LOG

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY WS	GROUND LEVEL m.A.O.D.
DRILLING METHOD Shell and Auger, 200mm dia. to 2.00m		START 22.2.83	COMPLETE 22.2.83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1 : 25	BORE NO. 18

LABORATORY TESTS						Soil Sample Type	Depth (m)	Instu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Seal
M	BD	C	φ	LL / PL	CGS							
						U+D	1.00		Sandy TOPSOIL with gravel	0.50		
									Brown, very sandy CLAY with broken rock	0.95		
23						D	1.50		Highly weathered, red, SANDSTONE	1.45		
									Red, SANDSTONE	2.00		

KEY

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- U - Undisturbed 100mm dia. Sample
- B - Bulk Disturbed Sample
- D - Small Disturbed Sample
- W - Water Sample
- M - Moisture Content (%)
- BD - Bulk Density (Kg/m³)
- C - Immediate Undrained Cohesion (kN/m²)
- φ - Immediate Undrained Friction Angle (degree)
- LL - Liquid Limit (%)

REMARKS

Borehole Dry

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

BORE LOG

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY HS	GROUND LEVEL m.A.O.D. 761
DRILLING METHOD Shell and Auger, 200mm dia. to 1.40m		START 23.2.83	COMPLETE 23.2.83
		SHEET 1 of 1	BORE NO. 19
		SCALE 1 : 25	

LABORATORY TESTS						Soil Sample Type	Depth (m)	In situ Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Lithology
M	BD	C	φ	LL / PL	CGS							
						D	0.50		Sandy TOPSOIL with gravel and cobbles	0.60		[Lithology: Sandy topsoil with gravel and cobbles]
									Sandy CLAY with gravel	0.80		[Lithology: Sandy clay with gravel]
						U	1.00		Weathered, red, SANDSTONE			[Lithology: Weathered, red, sandstone]
						D	1.40			1.40		[Lithology: (Blank)]

KEY

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- U - Undisturbed 100mm dia. Sample
- B - Bulk Disturbed Sample
- D - Small Disturbed Sample
- W - Water Sample
- M - Moisture Content (%)
- BD - Bulk Density (Kg/m³)
- C - Immediate Undrained Cohesion (kN/m²)
- φ - Immediate Undrained Friction Angle (degrees)
- LL - Liquid Limit (%)
- PL - Plastic Limit (%)

REMARKS

Borehole Dry

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

BORE LOG

CLIENT Scottish Development Department		SITE A94 Laurencekirk Bypass	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY H.S.	GROUND LEVEL m.A.O.D.
DRILLING METHOD Shell and Auger, 200mm dia, to 3.00m		START 23/2/82	COMPLETE 23/2/82
		SHEET 1 of 1	REF. NO. 761
		SCALE 1:25	BORE NO. 20

LABORATORY TESTS						Soil Sample Type	Depth (m)	Insitu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Lithology
M	BD	C	φ	LL / PL	CGS							
						D	0.50		Sandy TOPSOIL with gravel	0.40		
						U	1.00		Stiff, reddish brown, very sandy CLAY with gravel			
						D	1.50					
18	2069	*		31 / 19	CL	U	2.00			2.30		
						D	2.50		Red, SANDSTONE	3.00		

KEY

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- U - Undisturbed 100mm dia. Sample
- B - Bulk Disturbed Sample
- D - Small Disturbed Sample
- W - Water Sample
- M - Moisture Content (%)
- BD - Bulk Density (Kg/m³)
- C - Immediate Undrained Cohesion (kN/m²)
- φ - Immediate Undrained Friction Angle (degree)
- LL - Liquid Limit (%)

REMARKS

Borehole dry.

* Unable to test, Unconfined Compression Test

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

TRIAL PIT

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER H.A. Fairhurst and Partners		LOGGED BY GMcB	GROUND LEVEL m.A.O.D.
EXCAVATION METHOD Excavated by a JCB 3 D11 to 1.50m		START 3.3.83	COMPLETE 3.3.83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1 : 25	TRIAL PIT NO. 18

LABORATORY TESTS						Soil Sample Type	Depth (m)	Instu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	LOGGERS
M	BD	C	φ	LL / PL	CGS							
17				35 / 22	CI	B	0.50		Sandy clayey TOPSOIL containing rootlets	0.45		
									Firm to stiff, red, sandy, silty, CLAY with gravel with occasional cobble. Containing some rootlets	0.90		
						B	1.20		Highly weathered, red SANDSTONE	1.50		

- KEY**
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 - B - Bulk Disturbed Sample
 - D - Small Disturbed Sample
 - W - Water Sample
 - M - Moisture Content (%)
 - BD - Bulk Density (Kg/m³)
 - C - Immediate Undrained Cohesion (kN/m²)
 - φ - Immediate Undrained Friction Angle (degree)
 - LL - Liquid Limit (%)
 - PL - Plastic Limit (%)

REMARKS
Trial Pit Dry

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PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

TRIAL PIT

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY GHC	GROUND LEVEL m.A.O.D.
EXCAVATION METHOD Excavated by a JCB 3 D11 to 2.00m		START 4.3.83	COMPLETE 4.3.83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1 : 25	TRIAL PIT NO. 19

LABORATORY TESTS						Soil Sample Type	Depth (m)	Insitu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Lenses
M	BD	C	φ	LL / PL	CGS							
									Sandy clayey, TOPSOIL with rootlets	0.30		
									Firm, red, sandy silty, CLAY with gravel	1.70		
20				33 / 18	CL	B	1.00					
						B	2.00		Highly weathered red SANDSTONE	2.00		

KEY

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- B -- Bulk Disturbed Sample
- D -- Small Disturbed Sample
- W -- Water Sample
- M -- Moisture Content (%)
- BD -- Bulk Density (Kg/m³)
- C -- Immediate Undrained Cohesion (kN/m²)
- φ -- Immediate Undrained Friction Angle (degree)
- LL -- Liquid Limit (%)
- PI -- Plastic Limit (%)

REMARKS

Water seepage at 1.70m

10/11/83
 W.A. Fairhurst
 W.A. Fairhurst and Partners

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD. TRIAL PIT

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY GMcB	GROUND LEVEL m.A.O.D.
EXCAVATION METHOD Excavated by a JCB 3 D11 to 2.50		START 4.3.83	COMPLETE 4.3.83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1 : 25	TRIAL PIT NO. 20

LABORATORY TESTS						Soil Sample Type	Depth (m)	Instu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Legend
M	BD	C	φ	LL / PL	CGS							
16				32 / 17	CL	B	1.00		Sandy clayey TOPSOIL with rootlets	0.30		[Pattern]
18						B	2.00		Firm to stiff, red, sandy, silty, CLAY with gravel and pieces of broken rock			[Pattern]
										2.50		[Pattern]

KEY

- N(X) - Standard Penetration Test Result
- U - Undisturbed 100mm dia. Sample
- B - Bulk Disturbed Sample
- D - Small Disturbed Sample
- W - Water Sample
- M - Moisture Content (%)
- BD - Bulk Density (Kg/m³)
- C - Immediate Undrained Cohesion (kN/m²)
- φ - Immediate Undrained Friction Angle (degree)
- LL - Liquid Limit (%)

REMARKS

Trial Pit Dry

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

BORE LOG

CLIENT Scottish Development Department		SITE A94 Laurencekirk Bypass	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY W.S.	GROUND LEVEL m.A.O.D.
DRILLING METHOD Handrig, 125mm dia., to 2.50 m.		START 27/2/83	COMPLETE 27/2/83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1:25	BORE NO. 21

LABORATORY TESTS						Soil Sample Type	Depth (m)	Instru Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Legend
M	BD	C	ϕ	LL / PL	CGS							
									Sandy TOPSOIL with gravel	0.30		
14				30	CL	D	0.50					
18				18		D	1.00					
						U	1.50					
						D	2.00		Stiff reddish brown, very sandy CLAY with gravel	2.00		
									Red SANDSTONE	2.50		

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 - D - Small Disturbed Sample
 - W - Water Sample
 - M - Moisture Content (%)
 - BD - Bulk Density (Kg/m³)
 - C - Immediate Undrained Cohesion (kN/m²)
 - ϕ - Immediate Undrained Friction Angle (degree)
 - LL - Liquid Limit (%)
 - PI - Plastic Limit (%)

REMARKS

Borehole dry

W.A. Fairhurst and Partners
 14
 18

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

TRIAL PIT

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY GMcB	GROUND LEVEL m.A.O.D.
EXCAVATION METHOD Excavated by a JCB 3 D11 to 4.00m		START 4.3.83	COMPLETE 4.3.83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1 : 25	TRIAL PIT NO. 21

LABORATORY TESTS						Soil Sample Type	Depth (m)	Insitu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Legend
M	BD	C	φ	LL / PL	CGS							
									Sandy clayey TOPSOIL	0.45		
16				38 19	Cl	B	1.00		Firm to stiff, becoming sliffer with depth, red, sandy silty, CLAY with gravel and pieces of broken rock			
15						B	2.00					
						B	3.00					
						B	4.00			4.00		

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 - D - Small Disturbed Sample
 - W - Water Sample
 - M - Moisture Content (%)
 - BD - Bulk Density (Kg/m³)
 - C - Immediate Undrained Cohesion (kN/m²)
 - φ - Immediate Undrained Friction Angle (degree)
 - LL - Liquid Limit (%)
 - PL - Plastic Limit (%)

REMARKS

Trial Pit Dry

Unable to reach original pit position, excavated pit 25m towards main road.

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

BORE LOG

CLIENT Scottish Development Department		SITE A94 Laurencekirk Bypass	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY W.S.	GROUND LEVEL m.A.O.D. 761
DRILLING METHOD Shell and Auger, 200mm dia, to 1.40m		START 23/2/83	COMPLETE 23/2/83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1:25	BORE NO. 22

LABORATORY TESTS						Soil Sample Type	Depth (m)	Instu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Level
M	BD	C	φ	LL / PL	CGS							
						D	0.70		Sandy TOPSOIL and COBBLES	0.60		
						D	1.10					
						D	1.40		Highly weathered, red, SANDSTONE	1.40		

KEY

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- B - Bulk Disturbed Sample
- D - Small Disturbed Sample
- W - Water Sample
- M - Moisture Content (%)
- BD - Bulk Density (Kg/m³)
- C - Immediate Undrained Cohesion (kN/m²)
- φ - Immediate Undrained Friction Angle (degree)
- LL - Liquid Limit (%)

REMARKS

Borehole dry

1000
 900
 800
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PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

TRIAL PIT

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER H.A. Fairhurst and Partners		LOGGED BY DMcL	GROUND LEVEL m.A.O.D.
EXCAVATION METHOD Excavated by a JCB 3 D11 to 2.40m		START 9.3.83	COMPLETE 9.3.83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1 : 25	TRIAL PIT NO. 22

LABORATORY TESTS						Soil Sample Type	Depth (m)	Insitu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Log
M	BD	C	ϕ	LL / PL	CGS							
									Sandy clayey TOPSOIL	0.20		
17				28 20	Cl	B	1.00		Firm to stiff, red, very sandy, silty CLAY with gravel. Traces of weathered red sandstone from 1.25m onwards			
						B	2.00					
										2.40		

- KEY**
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 - W - Water Sample
 - M - Moisture Content (%)
 - BD - Bulk Density (Kg/m³)
 - C - Immediate Undrained Cohesion (kN/m²)
 - ϕ - Immediate Undrained Friction Angle (degree)
 - LL - Liquid Limit (%)
 - PL - Plastic Limit (%)

REMARKS
Trial Pit Dry

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PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

BORE LOG

CLIENT Scottish Development Department		SITE A94 Laurencekirk Bypass	
ENGINEER W.S. Fairhurst and Partners		LOGGED BY W.S.	GROUND LEVEL m.A.O.D.
DRILLING METHOD Shell and Auger, 200mm dia, to 2.50 m		START 24/2/83	COMPLETE 24/2/83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1:25	BORE NO. 23

LABORATORY TESTS						Soil Sample Type	Depth (m)	Insitu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	L Level
M	BD	C	φ	LL / PL	CGS							
									Sandy TOPSOIL	0.20		
						D	0.50		Stiff to very stiff, reddish brown, very sandy CLAY with gravel			
						D	1.00					
15	2122	80	35	41 / 26	CI	U	1.50			1.80		
						D	2.00		Red. SANDSTONE	2.50		

- KEY**
- N(X) - Standard Penetration Test Result
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 - B - Bulk Disturbed Sample
 - D - Small Disturbed Sample
 - W - Water Sample
 - M - Moisture Content (%)
 - BD - Bulk Density (Kg/m³)
 - C - Immediate Undrained Cohesion (kN/m²)
 - φ - Immediate Undrained Friction Angle (degree)
 - LL - Liquid Limit (%)

REMARKS

Borehole dry

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.

TRIAL PIT

CLIENT Scottish Development Department		SITE A94 LAURENCEKIRK BYPASS	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY DMcL	GROUND LEVEL m.A.O.D.
EXCAVATION METHOD Excavated by a JCB 3 D11 to 2.50m		START 9.3.83	COMPLETE 9.3.83
		SHEET 1 of 1	REF. NO. 761
		SCALE 1 : 25	TRIAL PIT NO. 23

LABORATORY TESTS						Soil Sample Type	Depth (m)	Insitu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Lenses
M	BD	C	φ	LL / PL	CGS							
									Sandy clayey TOPSOIL	0.35		
21				34 22	CL	B	1.00		Firm to stiff, red, very sandy silty CLAY with gravel	1.30		
						B	2.00		Highly weathered, red, SANDSTONE (Becoming less weathered with depth)			
						B	2.50			2.50		

KEY

- N(X) - Standard Penetration Test Result
- U - Undisturbed 100mm dia. Sample
- B - Bulk Disturbed Sample
- D - Small Disturbed Sample
- W - Water Sample
- M - Moisture Content (%)
- BD - Bulk Density (Kg/m³)
- C - Immediate Undrained Cohesion (kN/m²)
- φ - Immediate Undrained Friction Angle (degree)
- LL - Liquid Limit (%)
- PL - Plastic Limit (%)

REMARKS

Seepage of water from 1.50m

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.										BORE LOG			
CLIENT Scottish Development Department					SITE A94 Laurancekirk Bypass								
ENGINEER W.A. Fairhurst and Partners					LOGGED BY H.S.		GROUND LEVEL m.A.O.D.		REF. NO. 761				
DRILLING METHOD Shell and Auger, 200mm dia, to 2.50m					START COMPLETE 24/2/83 24/2/83		SHEET 1 of 1		BORE NO. 24				
							SCALE 1:25						
LABORATORY TESTS						STRATA DESCRIPTION							
M	BD	C	ϕ	LL / PL	CGS	Soil Sample Type	Depth (m)	In situ Tests	STRATA DESCRIPTION		Depth (m)	O.D. Level m.A.O.D.	Logging
									Sandy, clayey, TOPSOIL		0.10		
						D	0.50		Stiff, reddish brown, very sandy, CLAY with gravel				
23				41 23	CI	U	1.00						
20	*	*		37 21	CI	U	1.50						
						D	2.00					2.00	
									Red SANDSTONE		2.50		
KEY						REMARKS							
N(X) -- Standard Penetration Test Result U -- Undisturbed 100mm dia. Sample B -- Bulk Disturbed Sample D -- Small Disturbed Sample W -- Water Sample M -- Moisture Content (%) BD -- Bulk Density (Kg/m ³) C -- Immediate Undrained Cohesion (kN/m ²) ϕ -- Immediate Undrained Friction Angle (degree) LL -- Liquid Limit (%)						Borehole dry * Unable to test, Unconfined Compression Test and Bulk density							

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 100, Victoria Road, Glasgow, Scotland

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.										TRIAL PIT			
CLIENT						SITE							
Scottish Development Department						A94 LAURENCEKIRK BYPASS							
ENGINEER						LOGGED BY		GROUND LEVEL		REF. NO.			
W.A. Fairhurst and Partners						GMCB		m.A.O.D.		761			
EXCAVATION METHOD						START		COMPLETE		TRIAL PIT NO.			
Excavated by a JCB 3 D11 to 2.00m						3.3.83		3.3.83		25			
						SHEET		1 of 1					
						SCALE		1 : 25					
LABORATORY TESTS						STRATA DESCRIPTION							
M	BD	C	ϕ	LL / PL	CGS	Soil Sample Type	Depth (m)	In situ Tests	STRATA DESCRIPTION		Depth (m)	O.D. Level m.A.O.D.	Legend
14				32 / 17	CL	B	0.75		Sandy clayey, TOPSOIL		0.40		
						B	1.10		Firm to stiff, red, sandy, silty, CLAY with gravel and occasional cobbles		1.10		
						B	1.75		Highly weathered, red, SANDSTONE		2.00		
KEY						REMARKS							
N(X) - Standard Penetration Test Result U - Undisturbed 100mm dia. Sample B - Bulk Disturbed Sample D - Small Disturbed Sample W - Water Sample M - Moisture Content (%) BD - Bulk Density (Kg/m ³) C - Immediate Undrained Cohesion (kN/m ²) ϕ - Immediate Undrained Friction Angle (degree) LL - Liquid Limit (%) PL - Plastic Limit (%)						Trial Pit Dry							

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BORE LOG

CLIENT Scottish Development Department		SITE A94 Laurencekirk Bypass	
ENGINEER W.A. Fairhurst and Partners		LOGGED BY W.S.	GROUND LEVEL m.A.O.D. 761
DRILLING METHOD Shs11 and Auger, 200mm dia, to 1.90m		START 24/2/83	COMPLETE 24/2/83
		SHEET 1 of 1	BORE NO. 26
		SCALE 1:25	

LABORATORY TESTS						Soil Sample Type	Depth (m)	Insitu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Lithology
M	BD	C	ϕ	LL / PL	CGS							
						D	0.50		Sandy TOPSOIL	0.40		[Pattern]
						U	1.00					[Pattern]
						D	1.50		Stiff, brown, very sandy CLAY with gravel	1.50		[Pattern]
						D	1.90		Red SANDSTONE	1.90		[Pattern]

KEY

- N(X) - Standard Penetration Test Result
- U - Undisturbed 100mm dia. Sample
- B - Bulk Disturbed Sample
- D - Small Disturbed Sample
- W - Water Sample
- M - Moisture Content (%)
- BD - Bulk Density (Kg/m³)
- C - Immediate Undrained Cohesion (kN/m²)
- ϕ - Immediate Undrained Friction Angle (degree)
- LL - Liquid Limit (%)

REMARKS

Borehole dry

PRECONSTRUCTION SERVICES AND FOUNDATIONS LTD.			TRIAL PIT		
CLIENT Scottish Development Department			SITE A94 LAURENCEKIRK BYPASS		
ENGINEER W.A. Fairhurst and Partners		LOGGED BY DMcL	GROUND LEVEL m.A.O.D.	REF. NO. 761	
EXCAVATION METHOD Excavated by a JCB 3 D11 to 2.20m		START 9.3.83	COMPLETE 9.3.83	SHEET 1 of 1	TRIAL PIT NO. 26
			SCALE 1 : 25		

LABORATORY TESTS						Soil Sample Type	Depth (m)	Insitu Tests	STRATA DESCRIPTION	Depth (m)	O.D. Level m.A.O.D.	Log
M	BD	C	φ	LL / PL	CGS							
23				34 / 22	CL	B	0.70		Sandy clayey TOPSOIL	0.60		
						B	1.50		Firm to stiff, red, very sandy, silty CLAY with gravel	0.90		
						B	2.00		Highly weathered, red SANDSTONE	2.20		
									Unable to penetrate very hard strata			

- KEY**
- N(X) - Standard Penetration Test Result
 - U - Undisturbed 100mm dia. Sample
 - B - Bulk Disturbed Sample
 - D - Small Disturbed Sample
 - W - Water Sample
 - M - Moisture Content (%)
 - BD - Bulk Density (Kg/m³)
 - C - Immediate Undrained Cohesion (kN/m²)
 - φ - Immediate Undrained Friction Angle (degree)
 - LL - Liquid Limit (%)
 - PL - Plastic Limit (%)

REMARKS

Water in base of pit