

Appendix A

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**Site-specific Ground  
Conditions**

A1 Site-Specific Ground Conditions

Stratum	Approximate Top of Stratum (mOD)	Approximate Thickness of Stratum (m)	Description	Field Observations
Area 1: Chainage 0m to 120m (From Euston Road to start of realignment Area)				
Made Ground	+17.0	2.5	Firm, friable, dark brown, fine to coarse sandy, silty clays with some to much angular to rounded fine to coarse gravel of mainly brick with concrete, coal, flint, wood and tile. Occasional rootlets.	No odours or visual contamination observed.
Alluvial Deposits	-	-	-	Not recorded on logs in this area.
London Clay	+14.5	10	Firm, fissured, brown, occasionally mottled, light grey clay.  At depth: firm to stiff, grey-brown, mottled blue, extremely closely fissured clay. Occasional bioturbation and partings (<1mm) of yellow brown fine sand/silt.	Soils observed to be dry. No odours or visual contamination observed.
Area 2: Chainage 120m to 260m (Realignment works area)				
Made Ground	+16.75	2 to 4	Orange-brown, grey-black, silty, soft to firm clay or sand and flint gravel with some clinker, slag and brick fragments. Probably soft to firm.	No odours or visual contamination observed.
Alluvial Deposits	+14.75	1.5	Firm, brown, mottled, slightly sandy clay with a little rounded, fine and medium flint gravel.	No odours or visual contamination observed.
London Clay	+13.25	15	Firm, fissured, brown, occasionally mottled, light grey clay with occasional fine to coarse gravel and fine sand. Fissures are extremely closely spaced and subhorizontal.	No odours or visual contamination observed. Soils observed to be dry.
Area 3: Chainage 260m to 450m (North of realignment area to Goods Way)				

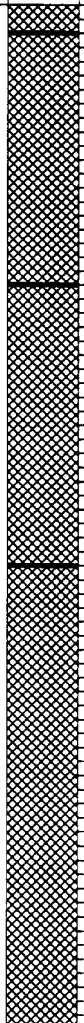
Stratum	Approximate Top of Stratum (mOD)	Approximate Thickness of Stratum (m)	Description	Field Observations
Made Ground	+16.5	2 to 4	Brownish, grey-black, silty clay or sand and gravel with some clinker, slag, glass, shell and brick fragments. Occasional black sand and subangular to subrounded fine gravel of ash.	Hydrocarbon and diesel odours noted in Made Ground to the north of the site area. Ash and slag observed.  Perched groundwater present in places at a depth of 2mbgl.
Alluvial Deposits	+14.5	2	Discontinuous alluvial deposits of silts and clays.	Ash and slag observed.
London Clay	+12.5	15	Firm, fissured, brown, occasionally mottled, light grey clay.  At depth: very soft, grey organic clay with occasional gravel size pockets of black fibrous peat and a little angular, coarse flint gravel.	Occasional fine to coarse gravel sized pockets of black sandy clay with an odour of naphthalene and rare hessian sack fragments.  Dry.

'mbgl' indicates metres below ground level

Equipment & Methods  
Hand dug inspection pit to 3.65m.  
Pit dimensions 0.90m by 2.90m.  
Support used : Shoring  
Backfill : Arisings and imported granular fill.

Location No.	8109
Location	CONTRACT 2 FOR PHASE 4 (1997) GROUND INVESTIGATIONS IN PROJECT AREA 100
Carried out for	Union Railways Limited

Ground Level	Coordinates	Date
16.39 m AOD	530131.01 mE	13/05/97
	183031.54 mN	to 15/05/97

Description FACE	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records	
				Depth	Sample			Test
					Type	No.		
Unreinforced CONCRETE. (MADE GROUND)	16.39 16.29		(0.10) 0.10	0.10	C	1		
				0.20	C	2		
				0.50	C	3		
Brick work in large arch (see sketch). (MADE GROUND)				1.00	C	4		
	15.39			(1.00)				
Medium dense brown slightly clayey fine to coarse SAND and fine to medium rounded to subangular GRAVEL comprising flint, brick with a little wood and metal fragments. Locally with some cobbles and rare boulder size masonry fragments. Below 1.70m, becoming increasingly clayey. (MADE GROUND - SAND AND GRAVEL)				2.00	2.00	C		5
	14.39			(1.65 pen)	2.50	W		8
					2.65	D		1
Firm locally soft to stiff brown sandy CLAY with some, locally much fine rounded to angular flint and brick gravel with a little wood and metal. At 3.20m, horizon of horizontally orientated bricks, no visible cement. Below 3.20m, with frequent brick fragments. (MADE GROUND - CLAY)				3.00 - 3.20 3.26	D C	2 6		
TRIAL PIT ENDS AT 3.65 m.	12.74		3.65	3.65	D	3		

Remarks
Stability : All stable
Similarity of faces : See sheet 2.
Water
1. Seepage at 2.10m.
2. Strike at 3.50m, approx.
3. Pumped and bailed out until backfilled.

Sketch

320 Dea

Logged by	
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18

Scale

1:25

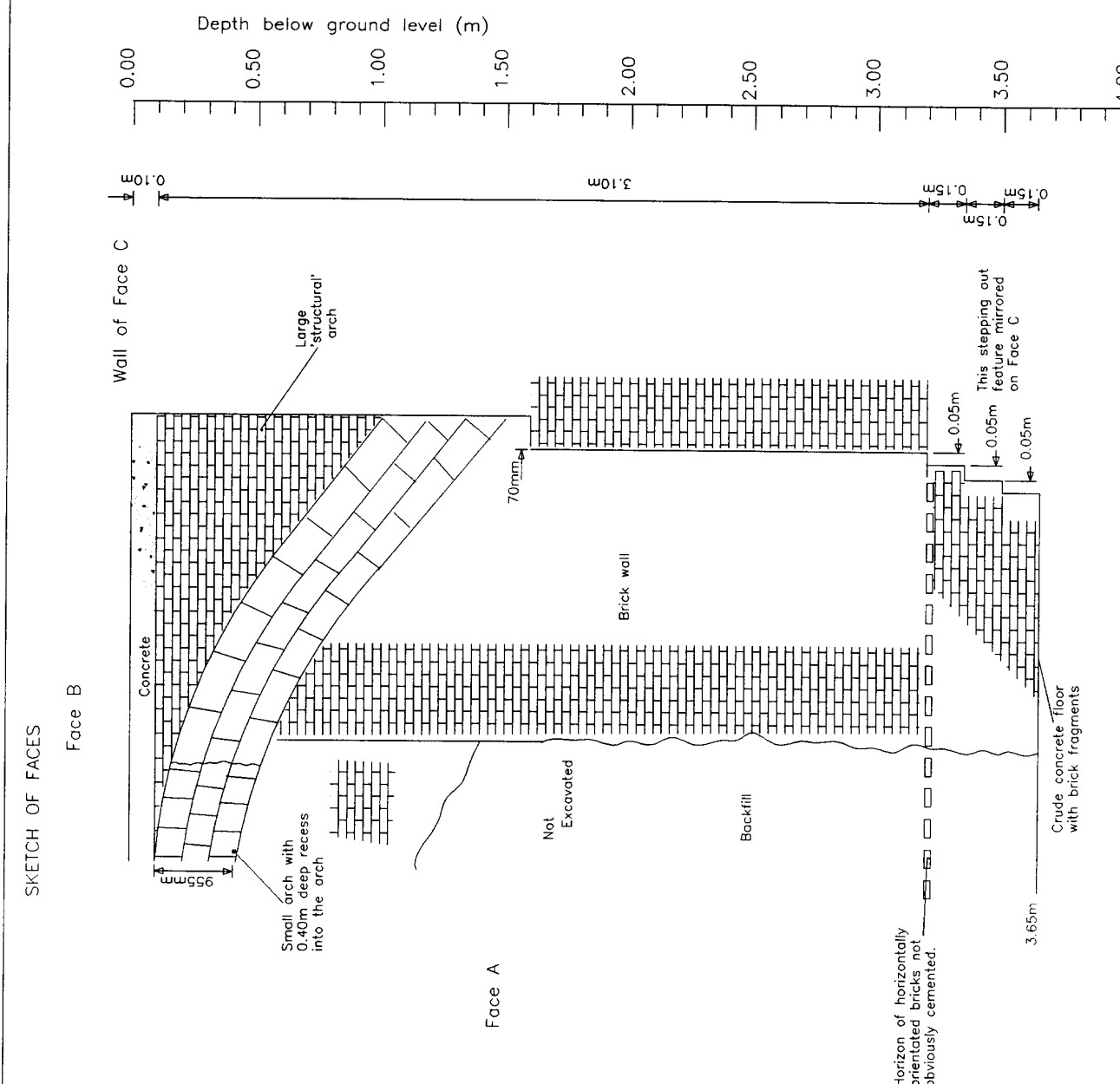
(c) Soil Mechanics (Ver 5.5)

13/11/97 14:09:07

Fig. 170

Location CONTRACT 2 FOR PHASE 4 (1997)  
GROUND INVESTIGATIONS IN PROJECT AREA 100

Location No. 8109



Note:  
1. For full descriptions of strata see sheet 1.

Scale  
1:25

Fig.  
170

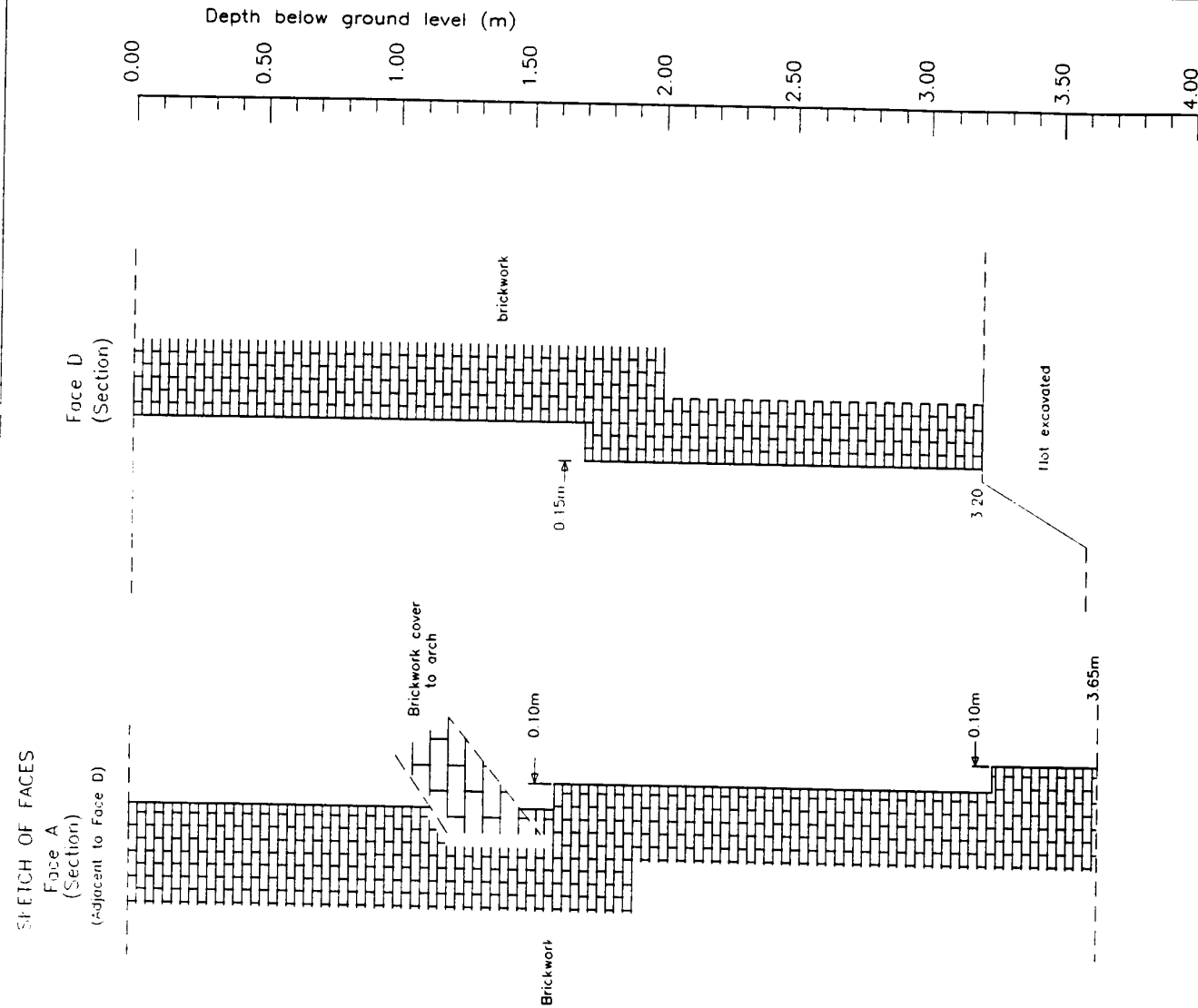
# Soil Mechanics

TRIAL PIT No. TP 7402

Sheet 3 of 3

Location CONTRACT 2 FOR PHASE 4 (1997)  
GROUND INVESTIGATIONS IN PROJECT AREA 100

Location No. 8109

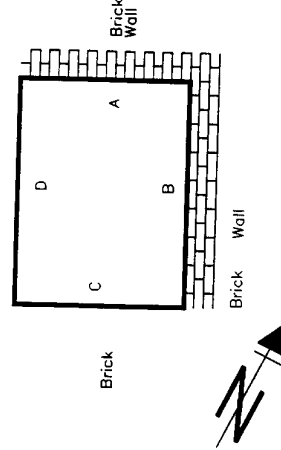


SKETCH OF FACES  
Face A  
(Section)  
(Adjacent to Face D)

Note:  
1. For full descriptions of strata see sheet 1.

PLAN  
(Not to scale)

Bearing  
320 deg.



Scale  
1:25

Fig.  
170

PROJECT: UNION RAILWAYS LIMITED CONTRACT L PHASE 3				METHOD OF EXCAVATION: HAND DUG AND SHORED				RECORD OF TRIAL PIT NO: BT3745A			
LOCATION: ST PANCRAS/ KINGS CROSS PACKAGE 1 SITE 18				SURFACE DIMENSIONS OF PIT: 4.00m x 2.00m				CO-ORDINATES: E: 530135.3 .... N: 183131.7 .....			
CONTRACT NO: 3000				START DATE: 09/10/95 ... FINISH DATE: 24/10/95				Sheet 1 of 3 GROUND LEVEL: 17.07 m.O.D			
IN SITU TESTING		SAMPLES		DESCRIPTION OF STRATA				FOR FACE DETAILS SEE SHEET 3 LOGGED IN SITU			
Depth (m)	Type	Result	Depth (m)	Type	No.	Thickness (m)	Depth (m)	Level (m.o.d)	Strata Symbol		
0.75	Vp	55.52,48	0.25 0.25 0.50 0.50	K K K K	1 2 3 4	TARNACADAM (MADE GROUND) CONCRETE. (MADE GROUND) Firm, dark grey CLAY with much angular, fine to coarse brick and concrete gravel. (MADE GROUND) Firm, brown mottled red brown slightly sandy (fine to coarse) CLAY with a little rounded, fine and medium flint gravel. (ALLUVIUM)	0.15	16.92			
							0.20	16.72			
							0.35	16.57			
							0.50				
1.50	Vp	72.50,66	1.50 1.30 1.00 1.00	B D K V	10 9	Firm, brown occasionally mottled light grey CLAY with occasional fine gravel sized firm lithorelicts and occasional cobble sized pockets of orange brown silt. (LONDON CLAY - GRADE IVb)	0.95	16.12			
							1.50	15.57			
2.00	Vp	52.58,60	2.00 2.00 2.00 2.00	B D K V	12 11 21 22						
2.50	Vp	68.68,72	2.50 2.50	B D	14 13		2.70	14.37			
3.00	Vp	78.88,82	3.00 3.00 3.00 3.00	B D K V	16 15 23 24	(Continued.....)					

REMARKS:  
1) Prior to mechanical excavation the top 120m was excavated manually.  
2) Groundwater was encountered at 0.70m as a slight seepage.  
3) The sides of the trial pit remained stable during excavation.  
4) In situ tests for gas composition and water quality were carried out during trial pit excavation.  
5) On completion, the trial pit was backfilled with arisings and reinstated with tarmacadam.

Scale 1:25

FIGURE: T32

Logged by: KNL/SH  
Checked by: SMP  
Approved by:

Date: 24/10  
3/11

FOUNDATION & EXPLORATION SERVICES

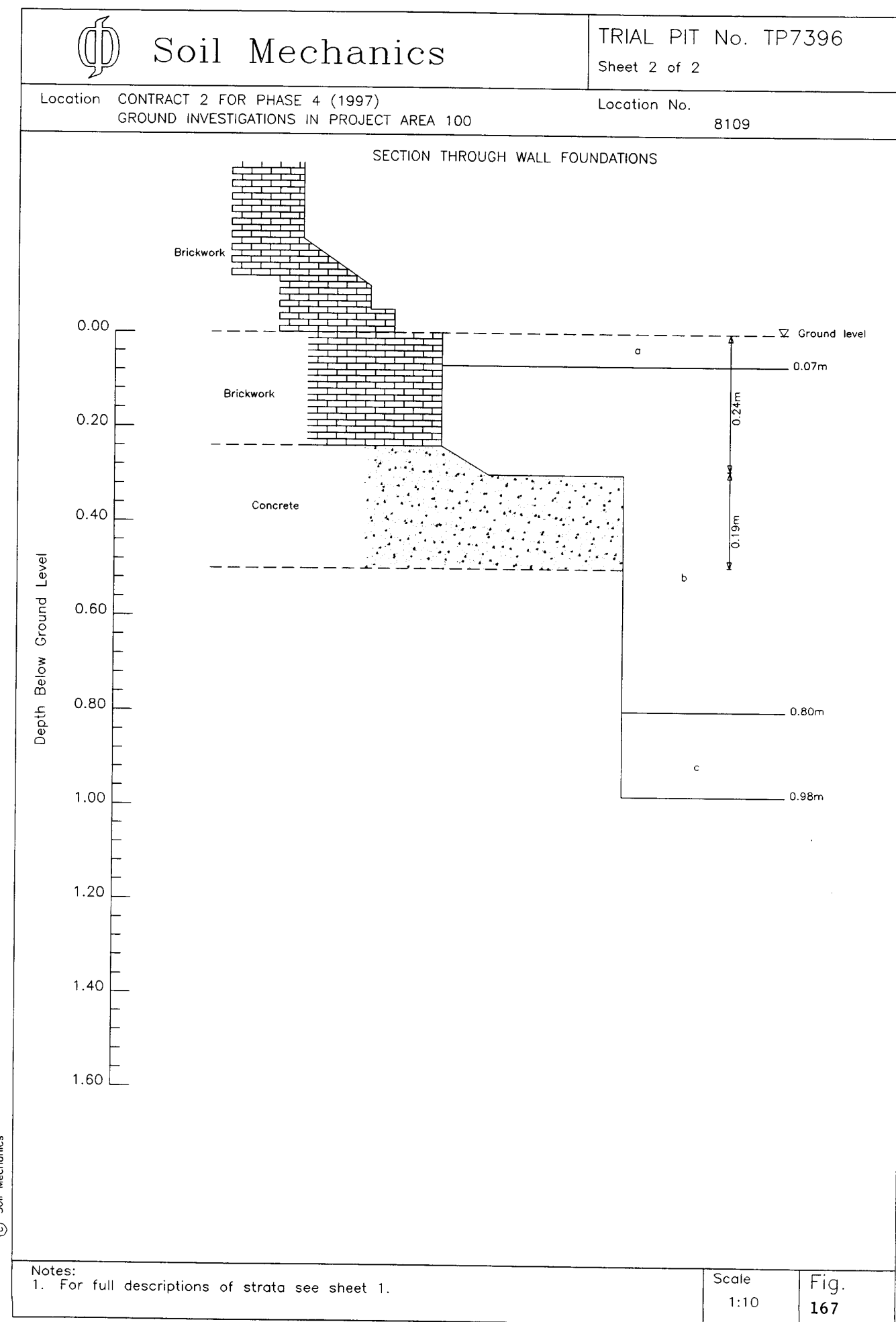
PROJECT: UNION RAILWAYS LIMITED CONTRACT L PHASE 3		METHOD OF EXCAVATION: HAND DUG AND SHORED		RECORD OF TRIAL PIT NO: 013745A	
LOCATION: ST PANCRAS/ KINGS CROSS PACKAGE 1 SITE 18		SURFACE DIMENSIONS OF PIT: 4.00m x 2.00m		CO-ORDINATES: E: 538135.3... N: 183133.7... m.O.D.	
CONTRACT NO: 3000		START DATE: 09/10/95... FINISH DATE: 24/10/95		Sheet 2 of 3	
INSITU TESTING		DESCRIPTION OF STRATA		GROUND LEVEL: 17.07	
Depth (m)	Type	Result	SAMPLES	FOR FACE DETAILS SEE SHEET 3	
3.55	Vp	82.78.102	Depth (m) 3.55	LOGGED IN SITU	
			Level (m.O.D.) 13.52		
			Strata Symbol		
CLAY (As Sheet 1) (LONDON CLAY - GRADE IVa)			END OF OBSERVATION PIT		
REMARKS:			PLAN		
			Scale 1:25		
			FIGURE: I33		

Trial Pit Detail Sheet				Trial Pit No. OT 3745 A			
Sheet 3 of 3							
<p>Face 'C' (or S)</p> <p>Face 'D'</p> <p>Area of pit logged &amp; sampled in detail</p> <p>Excavated manually to 1.20m then by machine to 3.70m</p> <p>Face 'A' (or N)</p> <p>Face 'B'</p> <p>Brick foundations from 0.40m to 1.00m (approx)</p> <p>PLAN</p> <p>Scale 1:25</p> <p>Not to scale</p>							
Prepared by		Date		Approved by		For Contractor	
Checked by		Date		For Engineer		Date	
<b>FOUNDATION &amp; EXPLORATION SERVICES</b>				UNION RAILWAYS LIMITED CONTRACT L PHASE 3 ST PANCRAS/ KINGS CROSS PACKAGE 1 SITE 18			
				CONTRACT No: 3000			
				FIGURE: I34			

<b>Soil Mechanics</b>		<b>TRIAL PIT No. TP7395</b> <small>Sheet 1 of 2</small>			
<b>Equipment &amp; Methods</b> Hand dug inspection pit to 1.00m. Pit dimensions: 0.90 x 0.90 x 1.00m. Backfilled with arisings		<b>Location No.</b> 8109 <b>Location</b> CONTRACT 2 FOR PHASE 4 (1997) GROUND INVESTIGATIONS IN PROJECT AREA 100 Carried out for Union Railways Limited			
<b>Ground Level</b> 16.80 m AOD		<b>Coordinates</b> 530121.70 mE 183146.54 mN			
<b>Date</b> 16/06/97					
Description FACE	Reduced Level	Legend	Depth (Thick)	Samples/Tests	Field Records
Depth	Sample Type	Sample No.	Test		
CONCRETE. (MADE GROUND)	16.80 16.72 16.65	(0.08) (0.08) (0.07) 0.15	0.08 - 0.15	C 1	
Grey black fine to medium SAND of ash. (MADE GROUND - SAND)			0.20 - 0.50	B 2	
			0.50	C 3	
Angular to subrounded fine to medium GRAVEL of flint, chalk and brick rubble. (MADE GROUND - GRAVEL)		(0.85 pen)			
TRIAL PIT ENDS AT 1.00 m.	15.80		1.00		
<b>Remarks</b> Stability : All stable Similarity of faces : See sheet 2  Water: None 1. Trial pit terminated due to services.					Logged by DL  Scale 1:25  <b>Fig. 166</b>
					<small>(c) Soil Mechanics (Ver 5.5) 13/11/97 13:57:33</small>

<b>Soil Mechanics</b>		<b>TRIAL PIT No. TP7395</b> <small>Sheet 2 of 2</small>	
<b>Location</b> CONTRACT 2 FOR PHASE 4 (1997) GROUND INVESTIGATIONS IN PROJECT AREA 100		<b>Location No.</b> 8109	
<b>PLAN VIEW OF SERVICES</b>			
<b>Section</b>			
<b>Notes:</b>			Not to Scale  <b>Fig. 166</b>

<b>Soil Mechanics</b>		<b>TRIAL PIT No.TP7396</b> <small>Sheet 1 of 2</small>					
<b>Equipment &amp; Methods</b> Hand dug inspection pit to 0.98m. Pit dimensions: 2.25m x 1.50m Backfilled with arisings		<b>Location No. 8109</b> <b>Location</b> CONTRACT 2 FOR PHASE 4 (1997) GROUND INVESTIGATIONS IN PROJECT AREA 100 Carried out for Union Railways Limited					
		<b>Ground Level</b> 17.06 m AOD	<b>Coordinates</b> 530074.38 mE 183190.51 mN				
<b>Date</b> 16/06/97							
Description FACE	Reduced Level	Legend	Depth (Thick)	Samples/Tests			Field Records
				Depth	Sample Type No.	Test	
a) CONCRETE. (MADE GROUND)	17.06 16.99		(0.07) 0.07	0.10 - 0.15	C	1	
d) Reddish brown subangular to subrounded fine to coarse GRAVEL and occasional cobbles of brick, glass and shell fragments. (MADE GROUND - GRAVEL)			(0.73)	0.20 - 0.90	B	2	
c) Firm brown mottled reddish brown CLAY. (MADE GROUND - CLAY)	16.26 16.08		0.80 (0.18p) 0.98	0.90 - 0.98	C	3	
TRIAL PIT ENDS AT 0.98 m.							
<b>Remarks</b> Stability : All poor Similarity of faces : See sheet 2  Water: None							Logged by DL  Scale 1:25  <b>Fig. 167</b>
							<small>(c) Soil Mechanics (Ver 5.5)</small> 13/11/97 13:57:45



PROJECT: UNION RAILWAYS LIMITED CONTRACT L PHASE 3		METHOD OF EXCAVATION: JCB 3CX HAMMER MASTER		RECORD OF TRIAL PIT NO: TP5010	
LOCATION: ST PANCRAS/ KINGS CROSS PACKAGE 2 SITE 96		SURFACE DIMENSIONS OF PIT: 1.80m x 1.00		CO-ORDINATES: Sheet 1 of 1	
CONTRACT NO: 3000		START DATE: 30/10/95... FINISH DATE: 30/10/95...		GROUND LEVEL: 18.21 m.O.D	
INSITU TESTING		DESCRIPTION OF STRATA		ALL FOUR FACES WERE IDENTICAL LOGGED IN SITU TO 120M THEN FROM ARISINGS.	
Depth (m)	Type	Result	Depth (m)	Level (m.O.D.)	Strata Symbol
0.05	K	65.65/62	0.10	18.11	
0.05	K	40.45/40	0.20	18.01	
0.50	B		0.70	17.51	
0.50	K		1.70	16.51	
1.00	B		2.70	15.51	
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