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MAIN ROADS DEPARTMENT ENGINEERING BORE LOG

Form 23 ZL (c)

PROJECT GATEWAY BRIDGE

(P) 13/79

Sheet 1 of 6

LOCATION Pier 7 Ch. 17145.5, 17.5m right of centreline  
N 34919.022 E 45197.122

HOLE No. B16

REF. H4964

JOB No. 140/ESD/JEX2.1 PROJECT No. 1/454

DATE 6/12/80 SURFACE R.L. -3.3

TYPE OF DRILLING Hollow Auger  
MMLC Coring

Depth (m) IX Casing 0.0 - 23.00  
Depth (m) HW Casing 23.0 - 36.00  
Depth (m)

ENGINEERING PROPERTIES				GRAPHIC LOG	FIELD SAMPLE & N VALUE	Depth & RL ( )	STRATA DESCRIPTION		
MC ( ) x 0	x 0	DD (1/m <sup>3</sup> ) 0	x 0				PARAMETERS & INDICES	1.50	0.00
						(-3.3)			
					41				
					1				

REMARKS

GEOLOGICAL APPR.

ENGR.

S.P.T.  
 Core Loss  
 WEATHERED  
 Extremely Weathered  
 Moderately Weathered  
 Water Level  
 NOTE FOR OTHER SYMBOLS

LOCATION

HOLE No B16 Cont.  
REF. B4964  
DATUM AND SURFACE R.L.

JOB No.

PROJECT No. 1/454

DATE

TYPE OF DRILLING

Hollow Auger

Depth (m)

Depth (m)

Coring

Depth (m)

Depth (m)

Casing

Depth (m)

Depth (m)

Depth (m)

Depth (m)

ENGINEERING PROPERTIES				GRAPHIC LOG	FIELD SAMPLE & N VALUE	Depth & RL ( ) 1.50 10.00 (-13.3)	STRATA DESCRIPTION	
MC ( ) x 0	x 0	DD (1/m <sup>2</sup> ) 0	0				PARAMETERS & INDICES	SOIL TYPE OR WEATHERING
					18			
					10			
					8			
					10			

REMARKS

GEOL. APPR.

ENGR.

SPT   
  Core Loss   
 WEATHERED   
  Extremely Weathered   
  Moderately Weathered   
 Water Level   
 NOTE FOR OTHER SYMBOLS

PROJECT GATEWAY BRIDGE

(P) 13/79

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LOCATION

HOLE No. B16 Con't

REF. H4964

DATUM AND

SURFACE R.L.

JOB No.

PROJECT No. 1/454

DATE

TYPE OF DRILLING

Hollow Auger

Depth (m) [ ]

Depth (m)

Casing

Depth (m) [ ]

Depth (m)

Coring

Depth (m) [ ]

Depth (m)

Depth (m) [ ]

Depth (m)

ENGINEERING PROPERTIES				GRAPHIC LOG	FIELD SAMPLE & N VALUE	Depth & RL ( )	STRATA DESCRIPTION	
MC ( ) x		DD (t/m <sup>3</sup> ) c					SOIL TYPE	LITHOLOGY OR WEATHERING
x 0	x 0	x 0	x 0					
						1:50 20.00 (-23.3)		
					10			
					35			
						28.10 (-31.40)		
					(0) 0			
					(0) 100			

**HIGHLY WEATHERED**  
light grey to black, soft clayey rock with approx 50% coal seams. Below RL-35.9 the proportion of coal decreases and there are no coal seams below RL-37.8

INTERBEDDED COAL AND SHALE coal seams to 75mm interbedded with fine stained poorly fissile shale

probable crush seams to 50mm in part (coal brecciated to 5mm)

REMARKS

GEOL. ENGR. APPR.

S.P.T.   
  Core Loss   
 WEATHERED CONDITION:
  Extremely Weathered   
  Moderately Weathered   
 Water Level   
 NOTE FOR OTHER SYMBOLS

MAIN ROADS DEPARTMENT ENGINEERING BORE LOG

PROJECT GATEWAY BRIDGE

(P) 73/70  
Sheet 4 of 6

HOLE No. B16 Cont.  
REF. H4964  
DATUM AND SURFACE R.L.

LOCATION

JOB No. PROJECT No 1/154 DATE

TYPE OF DRILLING Hollow Auger [ ] Depth (m) Casing [ ] Depth (m)  
Coring [ ] Depth (m) [ ] Depth (m)

ENGINEERING PROPERTIES		STRUCTURE	GRAPHIC LOG	CORE REC % R.O.D (%)	Depth & R.L. ( ) 1:50 30.00	STRATA DESCRIPTION	
Intact Strength	Defect Spacing					SOIL TYPE OR WEATHERING	LITHOLOGY
		Very poor quality core, highly fragmented, disturbed and eroded during drilling.		(0) 44	(-33.30)	HIGHLY WEATHERED (CONT)	INTERBEDDED COAL AND SHALE (CONT)
				(0) 63			
				(0) 0			
		crush seam (sub-vertical at least in part) fragments of coal and shale to 25mm in clay gouge.		(0) 48			
				(0) 69			
		crush seam (orientation unknown) fragments of coal and shale to 50mm in clay gouge.		(0) 100			
				(0) 97			
		Possible crush seam, clay gouge.		(0) 81	35.20	HIGHLY WEATHERED	SANDSTONE
		Steep shear zone (dips 60-80°) slickensides and clayey sand infill to 10mm thick.		(0) 81	-38.50	Grey, soft, clayey, sandy rock.	
				(0) 81	35.50	MODERATELY WEATHERED	
		bedding dips at 50°		(0) 99	-38.80	Light grey, uniformly weathered, contains occasional shale interbeds to 20mm mainly dipping at 10-20°, one steeply dipping zone as per graphic log. Defects are predominately steeply dipping (45-90°) Defects surfaces are often weathered and infilled with clayey sand.	Fine to medium grained, massive, with interbeds of mudstone and shale.
		crush seam clayey sand gouge.		(0) 100			
		subhorizontal extremely weathered seams to 100mm		(0) 100			
		possible crush seams, clayey sand gouge with rock fragments to 40mm.		(0) 100			
				(0) 100			
				(0) 100			
				(0) 100			
				(51) 100	39.42 (-42.72)	SLIGHTLY WEATHERED see next page.	

REMARKS

GEOL. ENGR. APPR.

S.P.T.	Core Loss	WEATHERED CONDITION	Extremely Weathered	Moderately Weathered	Water Level	NOTE FOR OTHER SYMBOLS SEE APPENDIX I
mm			Highly	Slightly		

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PROJECT GATEWAY BRIDGE

(P) 1/3/79

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LOCATION

HOLE No. B16 Cont't

REF. H4964

DATUM AND

SURFACE R.L.

JOB No.

PROJECT No. 1/154

DATE

TYPE OF DRILLING

Hollow Auger [ ] Depth (m)  
Coring [ ] Depth (m)

Casing [ ] Depth (m)  
[ ] Depth (m)

ENGINEERING PROPERTIES		STRUCTURE	GRAPHIC LOG	CORE REC. % R.Q.P ( )%	Depth & R.L. ( ) 1.50 40.00 (-43.30)	STRATA DESCRIPTION	
Intact Strength	Defect Spacing					SOIL TYPE	LITHOLOGY OR WEATHERING
[ ]	[ ]	Shear zone, shears are close spaced and dip at 60°	[ ]	(38) 100		SLIGHTLY WEATHERED (CONT) Light grey, contains interbeds of shale, mudstone and coal dipping at angles of 10-30° RL -42.72 to -43.50 shale interbeds 10-15mm constitute approximately 10% RL -43.50 to -45.70 Shale and massive mudstone interbeds to 45mm constitute 25-50% RL -45.70 to -48.0 coal stringers to 3mm and spaced at 3-20mm throughout	
[ ]	[ ]	extremely-highly weathered zone.	[ ]	(23) 100		see graphic log	
[ ]	[ ]	Subhorizontal extremely weathered seams	[ ]	(36) 100		Defects are predominately steeply dipping (45-90°) Defect surfaces are mainly planar, except for rough vertical joints.	
[ ]	[ ]	equal proportions of interbedded sandstone and mudstone in beds to 75mm.	[ ]	(21) 100		vertical joints.	
[ ]	[ ]		[ ]	(0) 100	45.45 (-48.75)	SLIGHTLY WEATHERED	
[ ]	[ ]		[ ]	(24) 67		Very dark grey to black Generally massive, but with occasional fine grained sandstone interbeds which dip at 20-30°	
[ ]	[ ]	crush seam (low angle?) rock fragments to 50mm in extremely weathered clayey silt gouge.	[ ]	(0) 44		Defects are predominately steeply dipping (45-90°) Defect surfaces are mainly planar smooth and clean except in crush zones or where noted in graphic log	
[ ]	[ ]	subvertical defect probably sheared with 20mm thick clayey silt gouge	[ ]	(0) 86		MUDSTONE fine grained, massive.	
[ ]	[ ]	extremely to highly weathered zone	[ ]	(21) 87			
[ ]	[ ]		[ ]	(0) 67			

REMARKS

GEOL. ENGR.  
APPR.

S.P.T. Core Loss WEATHERED Extremely Weathered Moderately Weathered Water Level

NOTE FOR OTHER SYMBOLS SEE APPENDIX I

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MAIN ROADS DEPARTMENT ENGINEERING BORE LOG

PROJECT GATEWAY BRIDGE

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Sheet 6 of 6

HOLE No. B16 Cont.

REF. E4964

LOCATION

DATUM AHD

SURFACE R.L.

JOB No.

PROJECT No. 1/454

DATE

TYPE OF DRILLING

Hollow Auger

Depth (m)

Casing

Depth (m)

Coring

Depth (m)

Depth (m)

ENGINEERING PROPERTIES		STRUCTURE	GRAPHIC LOG	CORE REC % R.Q.D. ( )%	Depth & R.L. ( )	STRATA DESCRIPTION		
Intact Strength	Defect Spacing					SOIL TYPE OR WEATHERING	LITHOLOGY	
		fragmented core defects dip 60-80° possible slickensides Probable shear zone		(20) 98	(-53.30)	SLIGHTLY WEATHERED (CONT.)		
				(16) 100				MUDSTONE (CONT.)
				(0) 100				
				(0) 14		52.32		
					(-55.62)	END OF HOLE		

REMARKS

GEOL. GE ENGR. NR  
APPR. *M. K. K...*

S.P.T. mm  
Core Loss

WEATHERED CONDITION

Extremely Weathered  
Highly

Moderately Weathered  
Slightly

Water Level

NOTE FOR OTHER SYMBOLS SEE APPENDIX