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ENGINEERING BOREHOLE

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/2-2004

GATEWAY UPGRADE PROJECT - GATEWAY BRIDGE FOUNDATION INVESTIGATION **PROJECT** LOCATION ABUTMENT A COORDINATES 10543.8 E; 167251.3 N PROJECT No <u>FG5388</u> _ _ _ SURFACE R.L. 21.32 DATE STARTED _24/4/05__ DATUM SETP _____ JOB No 0405 DATUM _AHD _. DATE COMPLETED 24/4/05 DRILLER GEO DRILLING PTY LTC R.L. ROD INTACT DEFECT NG DRILLING (m) ()% STRENGTH ADDITIONAL DATA SPACING ε MATERIAL (mm) DEPTH AND GRAPHIC SAMPLES DESCRIPTION TESTS CORE TEST RESULTS REC % 0 21.32 SILTY GRAVEL Grey. 21,12 SANDSTONE MEDIUM GRAINED MAINLY MASSIVE TO SLIGHTLY LAMIONATED POORLY CEMENTED SEDIMENTARY ROCK (100) ls(50)=0.10 MPa MW: Pale grey to mottled red brown, XW Clayey band. Is(50)=0.07 MPa 0 medium grained, mainly massive to XW Clayey band. Jt, 70-80°, PL, 5mm clay infill. faminated, mainly low to medium strength. Occasional interbeds of mudstone up to 100 80mm thick. Minor orange brown iron (85)staining in parts with some high strength iron cemented sands. MW - 2 Is(50)=0.10 MPa Is(50)=0.25 MPa 0 Lamination/ bedding partings < 10°(5/m).
Occasional joints @ 70-80° (1//m) (100) Jt,30°,PL,R,T, Ir. ls(50)=0.21 MPa (s(50)=0.57 MPa Jt,20°,PL,R,C, 1mm clay infill. 04.GDT 0 Defects are plannar, smooth to slightly BOREHOLE 09 -3 rough, clean or occasionally with 5mm thick ls(50)=0.13 MPa Is(50)=0.04 MPa clay infill. ٥ Is(50)=0.95 MPa 17.62 ENGINEERING INTERBEDDED MUDSTONE & SANDSTONE (SANDSTONE (86) - 4 DOMINANT) MW MW : Dark grey and grey with red iron 3s(50)=0.01 MPa Jt,40°,St,SR, Ir. 16.87 staining, fine to medium grained very low to ABUT A.GPJ (Is(50)=0.19 MPa 0 Is(50)=0.10 MPa Is(50)=0.49 MPa low strenath SANDSTÖNE 0 MW : Pale grey with orange-red iron Jt,10°,PL,SM, 2mm clay infill. is(50)=0.19 MPa MW staining, very coarse grained, low to Is(50)=0.54 MPa AND 0 medium strength. 16.07 (100)Jt,70°,PL,SM,T, Ir. Is(50)=0.06 MPa Is(50)=0.14 MPa Occasional pebbles and thin mudstone 0 interbeds MW SOUTHERN APPROACH INTERBEDDED MUDSTONE & Contact,10°,PL,SM,2mm ctay infill, iron stained. ls(50)=0.12 MPa 15.42 SANDSTONE -6 0 SW: Fine grained, low strength SANDSTONE MW : Pale grey with orange iron staining, coarse grained, mainly low to mdium strenath. (s(50)=0.10 MPa Is(50)=0.48 MPa o MW 띪 Occasional mudstone or fine grained (97) Is(50)=0.16 MPa sandstone interbeds is(50)=0.14 MPa 0 BORELOGS Defects: Bedding partings 10 - 20°. Joints @ 30° and 70° Jt.70°.PL.C. 2005-Clayey weathering zone. XW 24.5 Jŧ,30°,PL,SR,CN, minor clayey ls(50)=0.03 MPa WITH LITHOLOGY (100)Pale grey with orange iron staining, medium - coarse grained. Jt,30°,PL,T, 1mm cla(%,50),≃0.12 MPa -9 Defects mostly 30° or 70°, PL, Closed, or Jt.70°.PL. 2mm clay infill. occasionally with clay infill up to 2mm thick. MW 2 Jts,70°,PL,T,2mm clay infill, 40mm vertical displacement. 11.32 REMARKS LOGGED BY J. LESTER & A. DISSANAYAKE (DIS



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ENGINEERING BOREHOLE

FOR GEOTECHNICAL TERMS AND SYMBOLS REFER FORM F:GEOT 017/2-2004

BOREHOLE No BH2 SHEET _2_ of _2_ __H<u>9551</u>__ REFERENCE No.

GATEWAY UPGRADE PROJECT - GATEWAY BRIDGE FOUNDATION INVESTIGATION **PROJECT** LOCATION ABUTMENT A COORDINATES 10543.8 E; 167251.3 N PROJECT No _FG5388 _ _ _ _ SURFACE R.L. 21.32 DATE STARTED 24/4/05 DATUM SETP _____ JOB No 0405 DATUM __AHD __ DATE COMPLETED 24/4/05 DRILLER GEO DRILLING PTY LTC R.L. ROD INTACT DEFECT (m) ()% ADDITIONAL DATA STRENGTH SPACING DEPTH (m) 8 MATERIAL (mm) AND SAMPLE DESCRIPTION T1.32 POO Second T1.32 Pool Second Second T1.32 Pool Second T1.32 Pool Second Second Second Second Second Second Second Second Second Seco TESTS CORE 정출표돗포조기국의 28888 TEST RESULTS REC % 10 (70)SANDSTONE NA/A/ MW: (As above) Clayey weathering zone. X\M XW Clayey sand. Clay seam, 10°, brown. Contains some extremely weathered clayey HW MW Clay seam, 10°, brow¦s(50)=1.62 MPa ls(50)=0.72 MPa 10.47 INTERBEDDED MUDSTONE & Clay seam, 10°, dark grey, stiff. SILTSTONE (MUDSTONE DOMINANT) Jt,70°,PL,SM,CN. SW: Grey and dark grey, fine grained, Sheared seam, 10°, 20mm thick. laminated, very low to low strength. SW Thin carbonaceous laminations throughout. Is(50)=0.05 MPa (100)x 0 Defects: - Mostly lamination partings Is(50)=0.19 MPa parallel to bedding (10°) 9.37 - 12 Occasional joints @70°. Jt.70°, Un.R.T. Defects are PL, SM & CN SANDSTONE SW: Pale grey, medium grained, generally GDT. massive, mainly medium strength. Jt,80°,Cu,R,CN. SW 8 Occasional mudstone interbands. Jt,70-80°,PL-Cu,R,T,CN. BOREHOLE 09 - 13 Is(50)=0.35 MPa Is(50)=0.33 MPa Defects: Faint bedding partings ~10°. 0 7.97 Is(50)=0.08 MPa INTERBEDDED MUDSTONE & Is(50)=0.41 MPa SANDSTONE (MUDSTONE DOMINANT) Is(50)=0.38 MPa Ô ENGINEERING SW : Pale grey to dark grey, laminated and Is(50)=0.02 MPa Is(50)=0.04 MPa Is(50)=0.16 MPa interbedded, low to medium strength. SW ~ 14 Occasional siltstone bands. 0 Defects: - lamination Bedding partings Is(50)=0.02 MPa Is(50)=0.07 MPa <10°. - Occasional Joints @ 0 6.80 (100) SANDSTONE SW : Pale grey, fine to medium grained, mainly medium strength. ABUT 15 SW ls(50)=0.55 MPa Minor mudstone interbands; occasional ls(50)=0.56 MPa 0 carbonaceous laminations. 5.98 Mostly lamination/bedding partings (10-20°) - 16 Borehole terminated at 15.34m 8 - 17 2005 - BORELOGS F 24.5 - 19 REMARKS LOGGED BY J. LESTER & A. DISSANAYAKE (DIS

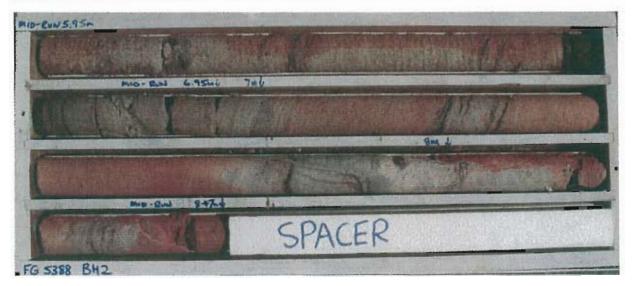
Gateway Upgrade Project - Gateway Bridge Project:

Borehole No: BH 2 Start Depth: 0.7m Finish Depth: 15.34m Project No: FG 5388

H No: 9551







Project: Gateway Upgrade Project - Gateway Bridge

Borehole No: BH 2

Start Depth: Finish Depth: 0.7m 15.34m

Project No: H No:

FG 5388 9551



