

**UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION
TEST RESULT REPORT**



Project: Ground Investigation for Northland Corridor
 Location : Section 2 - Te Hana to Port Marsden Highway, Section 2B GI
 Client : NZTA C/- Aurecon & WSP NZ Ltd.
 Borehole No: BH2B_1105
 Depth (m): 3.20-3.70
 Tested depth (m): 3.45-3.60
 Sampled by: NC Site Team
 Date Sampled: 3/09/2025
 Sampling Method: Pushtube
 Description: Silty CLAY with minor organics; brown mottled black; moist;
 Specimen Type : Undisturbed
 Comments: Single Sample Test

Project No: 1-C2466.16
 Lab Ref No: WL4708/25-TXL-UU
 Client Ref: 1-C2466.16

Test Results							
Initial Sample properties		S#1					
Initial Height (mm)		108.05					
Diameter (mm)		53.00					
Mean Shear Rate (mm/min)		1.0% / min (1.1mm/min)					
Specimen Sample No	Cell Pressure (kPa)	INITIAL PROPERTIES			Solid Particle Density (Mg/m ³)	Initial Void Ratio (e)	Deg of Saturation Sr (%)
		Densities (Mg/m ³)		Water Content (%)			
		Bulk (Mg/m ³)	Dry (Mg/m ³)				
1	50	1.59	0.97	64.4		1.79	97
					2.70		
					(assumed)		
Specimen Sample No	Cell Pressure (kPa)	Deviator Stress σ_v - σ_h (kPa)	Strain at Failure (%)	Failure Criteria at Maximum Values	Final Water Content (%)	Undrained Shear Strength (kPa)	
1	50	57.6	10	Dev. Stress	64.3	28.8	
Test Methods				Notes:			
Unconsolidated Undrained Triaxial Test : BS EN ISO 17892-8:2018 Water Content : NZS 4402:1986 Test 2.1				Mg/m³ is equivalent to t/m³			

Date Tested: 5/11/2025
 Date Reported: 20/11/2025

Sampling is not covered by IANZ Accreditation. Results apply only to sample tested.
 This report may only be reproduced in full
 All information supplied by Client

Approved Signatory:

Thirushen Pillay
 Senior Civil Engineering Technician
 Date: 20/11/2025



Test results indicated as not
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UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION

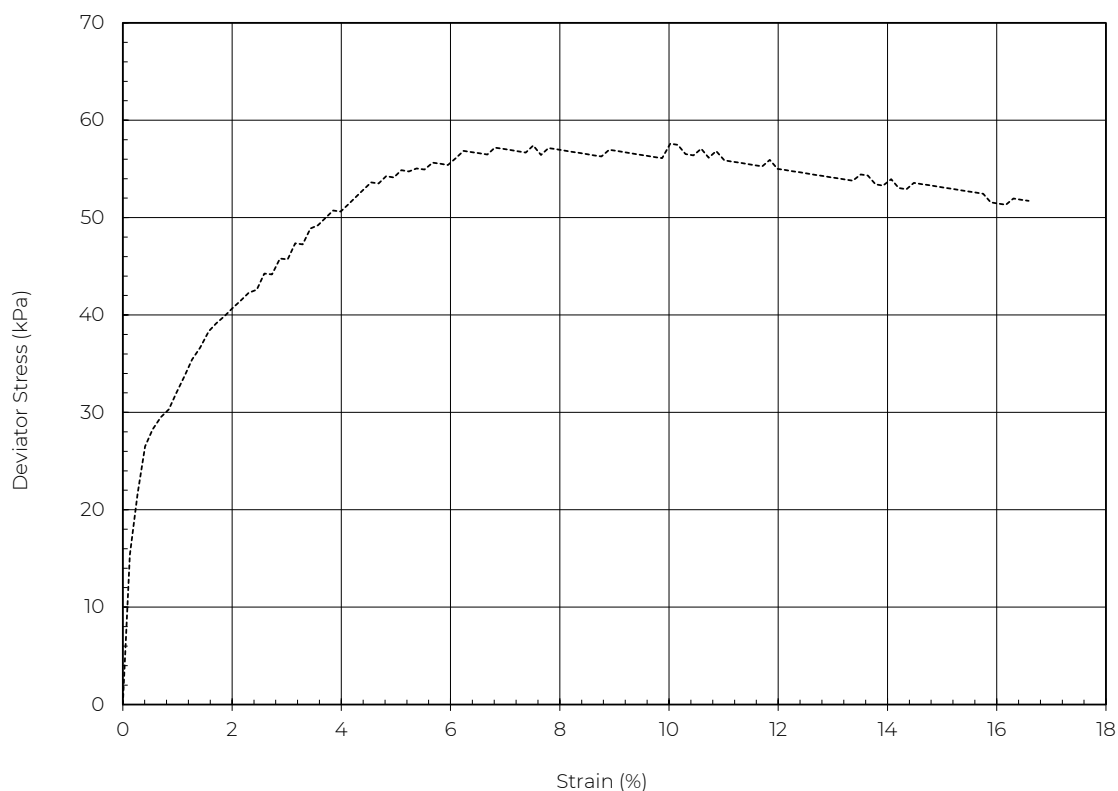
Test Report - Strain vs Deviator Stress Plot



Project: Ground Investigation for Northland Corridor
 Location: Section 2 - Te Hana to Port Marsden Highway, Section 2B GI
 Client: NZTA C/- Aurecon & WSP NZ Ltd.
 Borehole No: BH2B_1105
 Depth (m): 3.20-3.70
 Tested depth (m): 3.45-3.60
 Sampled by: NC Site Team
 Date Sampled: 3/09/2025
 Sampling Method: Pushtube
 Description: Silty CLAY with minor organics; brown mottled black; moist; plastic
 Specimen Type: Undisturbed
 Comments: Single Sample Test

Project No: 1-C2466.16
 Lab Ref No: WL4708/25-TXL-UU
 Client Ref: 1-C2466.16

Strain vs Deviator Stress Plot



Test Methods

Unconsolidated Undrained Triaxial Test : BS EN ISO 17892-8:2018
 Water Content : NZS 4402:1986 Test 2.1

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Date Tested: 5/11/2025
 Date Reported: 20/11/2025

Approved Signatory:

Thirushen Pillay
 Senior Civil Engineering Technician
 Date: 20/11/2025



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**UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION
TEST RESULT REPORT**



Project: Ground Investigation for Northland Corridor
 Location : Alternative to Brynderwyn Hills Section
 Client : NZTA C/- Aurecon & WSP NZ Ltd.
 Borehole No: BH2B_1146
 Depth (m): 3.00-3.50
 Tested depth (m): 3.30-3.45
 Sampled by: NC Site Team
 Date Sampled: 24/11/2025
 Sampling Method: Pushtube
 Description: Silty CLAY; grey; moist; plastic
 Specimen Type : Undisturbed
 Comments: Single Sample Test

Project No: 1-C2466.16
 Lab Ref No: WL4708/206-TXL-UU
 Client Ref: 1-C2466.16

Test Results							
Initial Sample properties		S#1					
Initial Height (mm)		107.75					
Diameter (mm)		53.45					
Mean Shear Rate (mm/min)		1.0% / min (1.1mm/min)					
Specimen Sample No	Cell Pressure (kPa)	INITIAL PROPERTIES			Solid Particle Density (Mg/m ³)	Initial Void Ratio (e)	Deg of Saturation Sr (%)
		Densities (Mg/m ³)		Water Content (%)			
		Bulk (Mg/m ³)	Dry (Mg/m ³)				
1	50	1.69	1.09	55.3		1.50	100
					2.72		
					(assumed)		
Specimen Sample No	Cell Pressure (kPa)	Deviator Stress σ_v - σ_h (kPa)	Strain at Failure (%)	Failure Criteria at Maximum Values	Final Water Content (%)	Undrained Shear Strength (kPa)	
1	50	49.3	6	Dev. Stress	55.5	24.7	
Test Methods				Notes:			
Unconsolidated Undrained Triaxial Test : BS EN ISO 17892-8:2018 Water Content : NZS 4402:1986 Test 2.1				Mg/m³ is equivalent to t/m³			

Date Tested: 19/12/2025
 Date Reported: 9/01/2026

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Approved Signatory: 
 Designation: Thirushen Pillay
 Date: Senior Civil Engineering Technician
 9/01/2026



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UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION

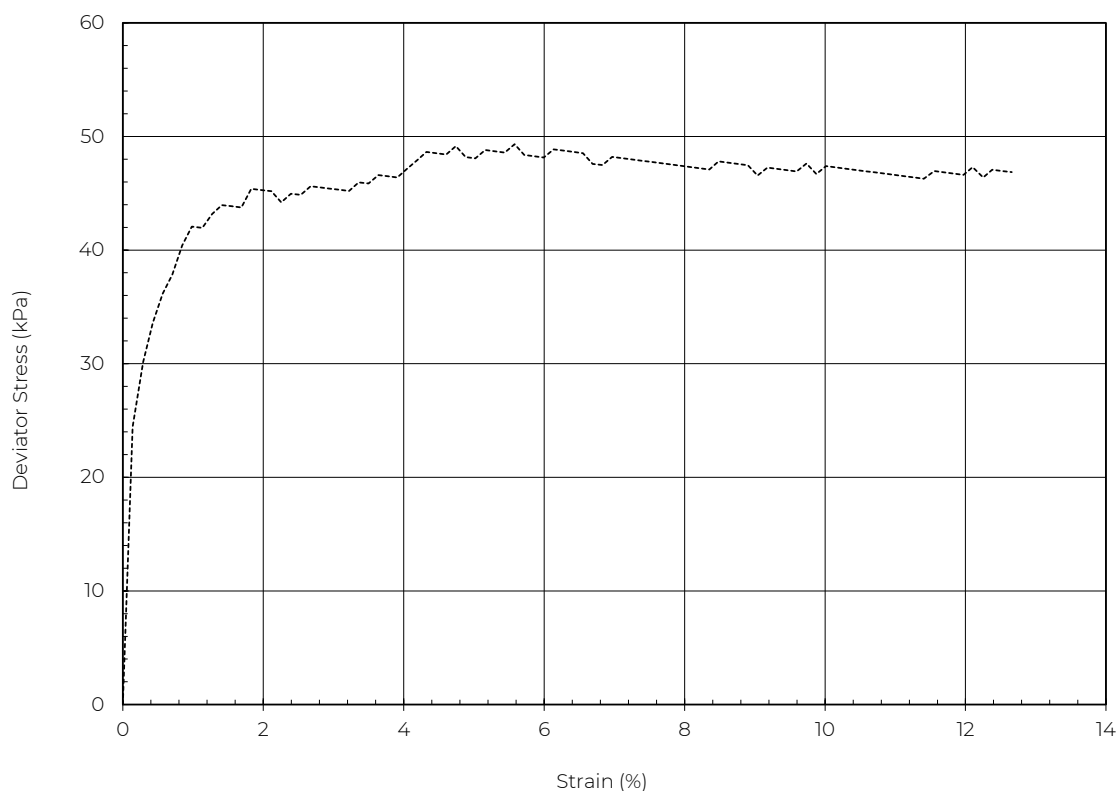
Test Report - Strain vs Deviator Stress Plot



Project: Ground Investigation for Northland Corridor
 Location: Alternative to Brynderwyn Hills Section
 Client: NZTA C/- Aurecon & WSP NZ Ltd.
 Borehole No: BH2B_1146
 Depth (m): 3.00-3.50
 Tested depth (m): 3.30-3.45
 Sampled by: NC Site Team
 Date Sampled: 24/11/2025
 Sampling Method: Pushtube
 Description: Silty CLAY; grey; moist; plastic
 Specimen Type: Undisturbed
 Comments: Single Sample Test

Project No: 1-C2466.16
 Lab Ref No: WL4708/206-TXL-UU
 Client Ref: 1-C2466.16

Strain vs Deviator Stress Plot



Test Methods

Unconsolidated Undrained Triaxial Test : BS EN ISO 17892-8:2018
 Water Content : NZS 4402:1986 Test 2.1

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Date Tested: 19/12/2025
 Date Reported: 9/01/2026

Approved Signatory:

Thirushen Pillay
 Senior Civil Engineering Technician
 Date: 9/01/2026



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**UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION
TEST RESULT REPORT**



Project: Ground Investigation for Northland Corridor
 Location : Section 2 Te Hana to Port Marsden Highway Section 2B GI
 Client : NZTA C/- Aurecon & WSP NZ Ltd.
 Borehole No: BH2B_1150
 Depth (m): 2.00-2.50
 Sampled by: NC_Site Team
 Date Sampled: 18/08/2025
 Sampling Method: Pushtube
 Description: Silty CLAY; grey; moist;plastic

Specimen Type : Undisturbed
 Comments: Single Sample Test

Project No: 1-C2466.16
 Lab Ref No: WL4708/17_TXL-UU
 Client Ref: 1-C2466.16

Test Results							
Initial Sample properties		S#1					
Initial Height (mm)		100.90					
Diameter (mm)		49.68					
Mean Shear Rate (mm/min)		1.0% / min (1.0mm/min)					
Specimen Sample No	Cell Pressure (kPa)	INITIAL PROPERTIES			Solid Particle Density (Mg/m³)	Initial Void Ratio (e)	Deg of Saturation Sr (%)
		Densities (Mg/m³)		Water Content (%)			
		Bulk (Mg/m³)	Dry (Mg/m³)				
1	40	1.63	0.96	69.2		1.83	100
					2.72		
					(assumed)		
Specimen Sample No	Cell Pressure (kPa)	Deviator Stress σ _v -σ _h (kPa)	Strain at Failure (%)	Failure Criteria at Maximum Values	Final Water Content (%)	Undrained Shear Strength (kPa)	
1	40	29.0	11	Dev. Stress	68.9	14.5	
Test Methods				Notes:			
Unconsolidated Undrained Triaxial Test : BS EN ISO 17892-8:2018 Water Content : NZS 4402:1986 Test 2.1				Mg/m³ is equivalent to t/m³			

Date Tested: 25/09/2025
 Date Reported: 7/10/2025

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Approved Signatory:
 Designation: Thirushen Pillay
 Date: Senior Civil Engineering Technician
 7/10/2025



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UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION
Test Report - Strain vs Deviator Stress Plot

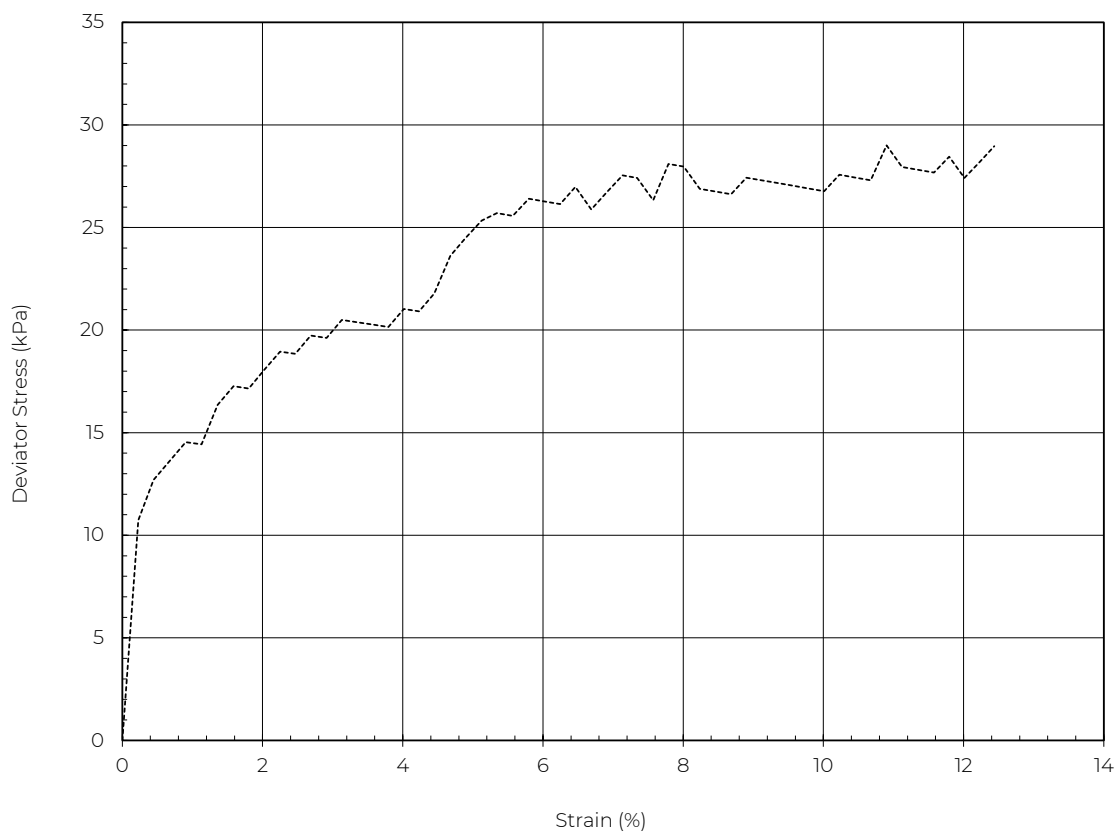


Project: Ground Investigation for Northland Corridor
Location : Section 2 Te Hana to Port Marsden Highway Section 2B GI
Client : NZTA C/- Aurecon & WSP NZ Ltd.
Borehole No: BH2B_1150
Depth (m): 2.00-2.50
Sampled by: NC_Site Team
Date Sampled: 18/08/2025
Sampling Method: Pushtube
Description: Silty CLAY; grey; moist; plastic

Specimen Type : Undisturbed
Comments: Single Sample Test

Project No: 1-C2466.16
Lab Ref No: WL4708/17_TXL-UU
Client Ref: 1-C2466.16

Strain vs Deviator Stress Plot



Test Methods

Unconsolidated Undrained Triaxial Test : BS EN ISO 17892-8:2018
Water Content : NZS 4402:1986 Test 2.1

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Designation: Thirushen Pillay
Date: Senior Civil Engineering Technician
7/10/2025



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