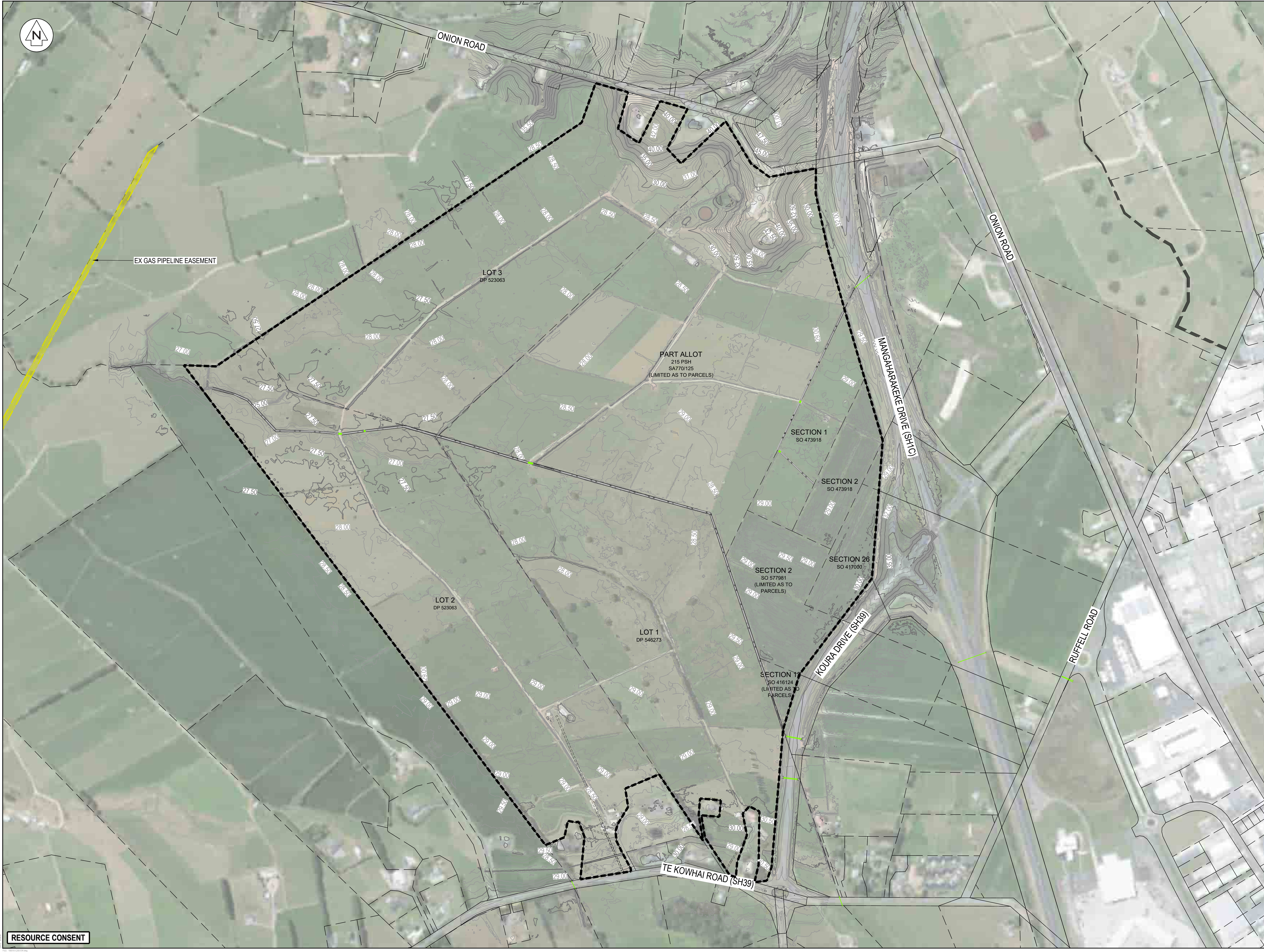


APPENDIX B

Design and Scheme Drawings



- NOTES
1. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000
 2. LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
 3. ORIGIN OF LEVELS = BP 3 SO 466570 (EMDK)
 4. PUBLISHED RL=38.59, SOURCED FROM THE LINZ DIGITAL GEODETIC DATABASE.
 5. BOUNDARIES ARE SUBJECT TO FINAL SURVEY.
 6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL SERVICES THAT MAY BE AFFECTED BY THEIR OPERATIONS.

- LEGEND
- EX SITE BOUNDARY
 - - - EX BDY
 - - - EX MAJOR CONTOUR
 - - - EX MINOR CONTOUR
 - - - EX CULVERT

Ref	Revisions	By	Date
A	RESOURCE CONSENT	HN	08/2026
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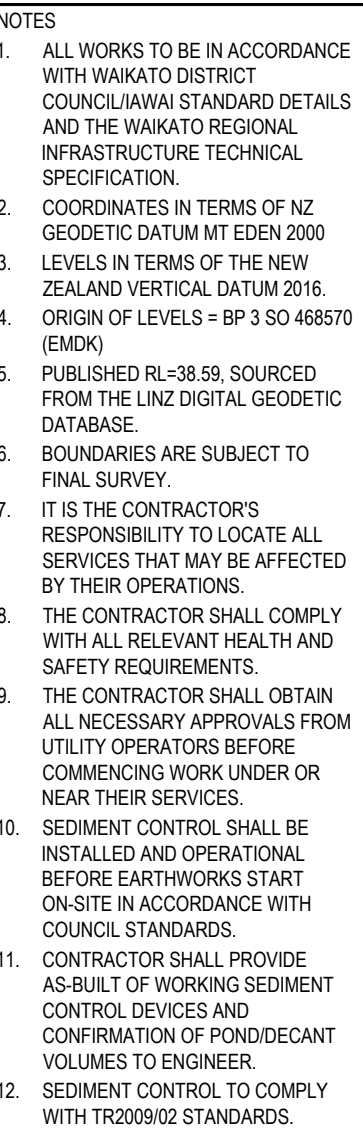
Maven Associates
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3 Chivers Road, Epsom
Auckland 1050

Project
PROPOSED INDUSTRIAL DEVELOPMENT AT TE KOWHAI EAST FOR TE KOWHAI EAST LIMITED PARTNERSHIP

Title
EXISTING TOPOGRAPHICAL SURVEY PLAN

Project no: 180010
Scale: 1:4000 @ A1
Cad file: 180010-0200-000-0000
Drawing no: C200 Rev: A

RESOURCE CONSENT



LEGEND

- PR EXTENT WORK
- EX BDY
- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- EX CULVERT

A	RESOURCE CONSENT	HN	08/2026		
Ref	Revisions	By	Date		
	By	Date			
Survey	MAVEN	10/2025			
Design	HN	08/2026			
Drawn	SP	08/2026			
Checked	RW	08/2026			

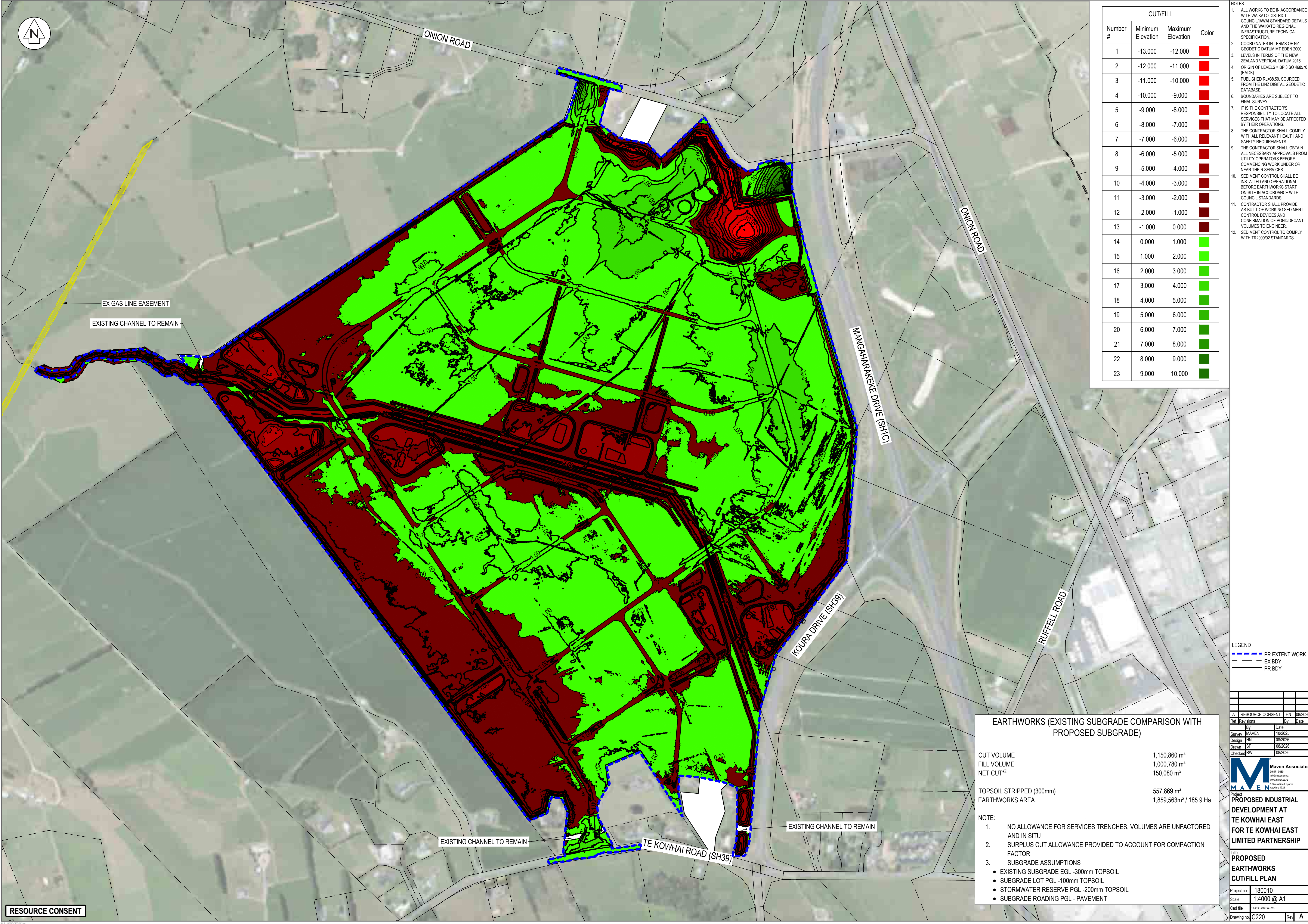


**PROPOSED INDUSTRIAL
DEVELOPMENT AT
TE KOWHAI EAST
FOR TE KOWHAI EAST
LIMITED PARTNERSHIP**

Title
**PROPOSED
EARTHWORKS
CONTOUR PLAN**

Project no.	180010		
Scale	1:4000 @ A1		
Lead file	180010-C200 EW.DWG		
Drawing no	C205	Rev	A

RESOURCE CONSENT



CUT/FILL			
Number	Minimum Elevation	Maximum Elevation	Color
1	-13.000	-12.000	Red
2	-12.000	-11.000	Red
3	-11.000	-10.000	Red
4	-10.000	-9.000	Red
5	-9.000	-8.000	Red
6	-8.000	-7.000	Red
7	-7.000	-6.000	Red
8	-6.000	-5.000	Red
9	-5.000	-4.000	Red
10	-4.000	-3.000	Red
11	-3.000	-2.000	Red
12	-2.000	-1.000	Red
13	-1.000	0.000	Red
14	0.000	1.000	Green
15	1.000	2.000	Green
16	2.000	3.000	Green
17	3.000	4.000	Green
18	4.000	5.000	Green
19	5.000	6.000	Green
20	6.000	7.000	Green
21	7.000	8.000	Green
22	8.000	9.000	Green
23	9.000	10.000	Green

- NOTES
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO DISTRICT COUNCIL/HAIAI STANDARD DETAILS AND THE WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATION.
 - COORDINATES IN TERMS OF NZ GEODETIC DATUM M1 EDEN 2000
 - LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
 - ORIGIN OF LEVELS = BP 3 SO 468570 (EMDK)
 - PUBLISHED RL=38.59. SOURCED FROM THE LINZ DIGITAL GEODETIC DATABASE.
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 - CONTRACTOR SHALL PROVIDE AS-BUILT OF WORKING SEDIMENT CONTROL DEVICES AND CONFIRMATION OF POND/DECANT VOLUMES TO ENGINEER.
 - SEDIMENT CONTROL TO COMPLY WITH TR200902 STANDARDS.

LEGEND

- PR EXTENT WORK
- EX BDY
- PR BDY

A	RESOURCE CONSENT	HN	08/2026
Rev	Revisions	By	Date
	By	Date	
Survey	MAVEN	10/2025	
Design	HN	08/2026	
Drawn	SP	08/2026	
Checked	RW	08/2026	



Project
PROPOSED INDUSTRIAL DEVELOPMENT AT TE KOWHAI EAST FOR TE KOWHAI EAST LIMITED PARTNERSHIP

Title
PROPOSED EARTHWORKS CUT/FILL PLAN

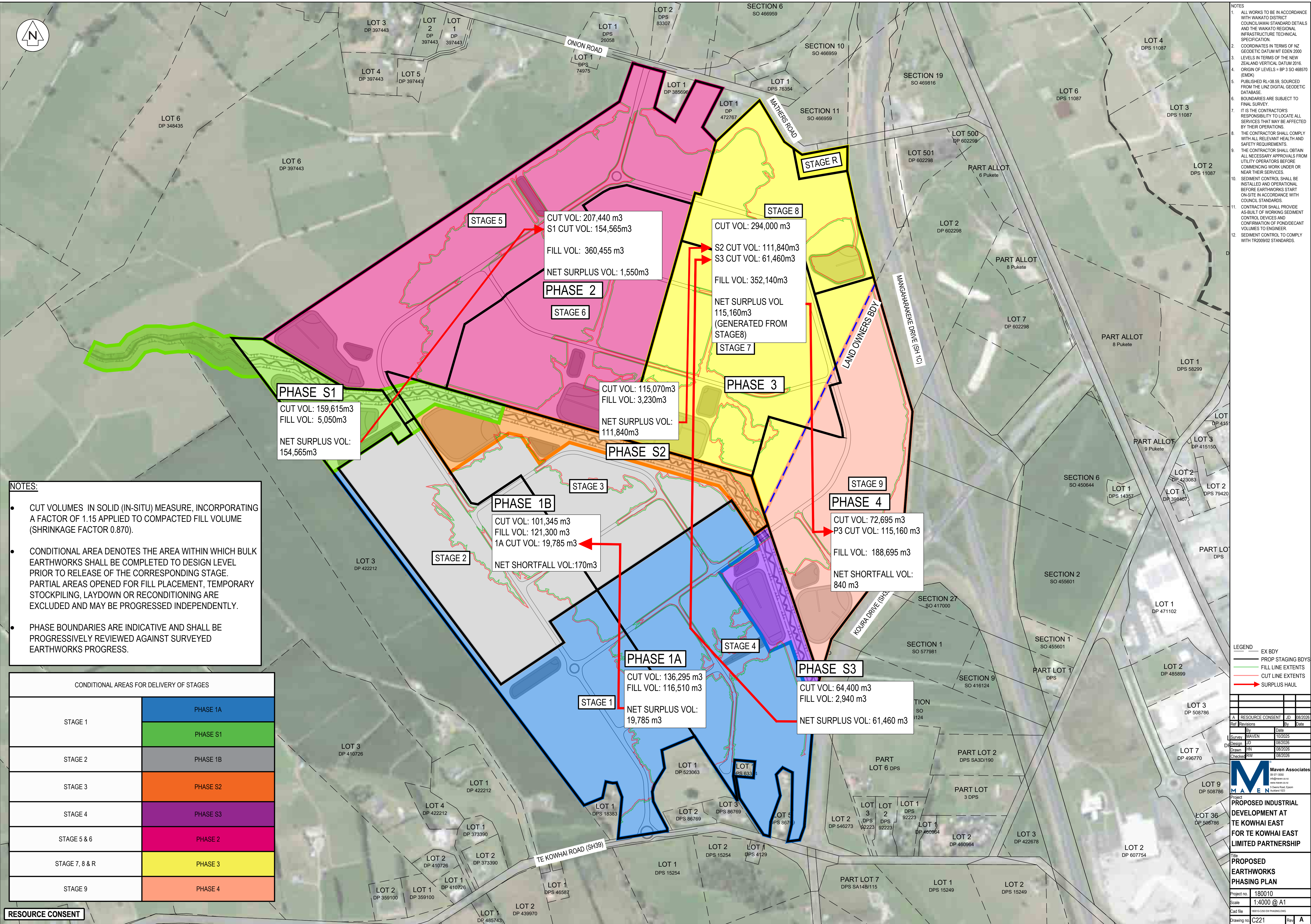
Project no.	180010
Scale	1:4000 @ A1
Cad file	180010-C220-EIA-DWG
Drawing no.	C220
Rev	A

EARTHWORKS (EXISTING SUBGRADE COMPARISON WITH PROPOSED SUBGRADE)

CUT VOLUME	1,150,860 m³
FILL VOLUME	1,000,780 m³
NET CUT*²	150,080 m³

TOPSOIL STRIPPED (300mm)	557,869 m³
EARTHWORKS AREA	1,859,563m² / 185.9 Ha

- NOTE:
- NO ALLOWANCE FOR SERVICES TRENCHES, VOLUMES ARE UNFACTORED AND IN SITU
 - SURPLUS CUT ALLOWANCE PROVIDED TO ACCOUNT FOR COMPACTION FACTOR
 - SUBGRADE ASSUMPTIONS
 - EXISTING SUBGRADE EGL - 300mm TOPSOIL
 - SUBGRADE LOT PGL - 100mm TOPSOIL
 - STORMWATER RESERVE PGL - 200mm TOPSOIL
 - SUBGRADE ROADING PGL - PAVEMENT



- NOTES:**
- CUT VOLUMES IN SOLID (IN-SITU) MEASURE, INCORPORATING A FACTOR OF 1.15 APPLIED TO COMPACTED FILL VOLUME (SHRINKAGE FACTOR 0.870).
 - CONDITIONAL AREA DENOTES THE AREA WITHIN WHICH BULK EARTHWORKS SHALL BE COMPLETED TO DESIGN LEVEL PRIOR TO RELEASE OF THE CORRESPONDING STAGE. PARTIAL AREAS OPENED FOR FILL PLACEMENT, TEMPORARY STOCKPILING, LAYDOWN OR RECONDITIONING ARE EXCLUDED AND MAY BE PROGRESSED INDEPENDENTLY.
 - PHASE BOUNDARIES ARE INDICATIVE AND SHALL BE PROGRESSIVELY REVIEWED AGAINST SURVEYED EARTHWORKS PROGRESS.

CONDITIONAL AREAS FOR DELIVERY OF STAGES	
STAGE 1	PHASE 1A
	PHASE S1
STAGE 2	PHASE 1B
STAGE 3	PHASE S2
STAGE 4	PHASE S3
STAGE 5 & 6	PHASE 2
STAGE 7, 8 & R	PHASE 3
STAGE 9	PHASE 4

RESOURCE CONSENT

- NOTES:**
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO DISTRICT COUNCIL/IAWAH STANDARD DETAILS AND THE WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATION.
 - COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000
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 - SEDIMENT CONTROL TO COMPLY WITH TR2009/02 STANDARDS.

- LEGEND**
- EX BDY
 - PROP STAGING BDYS
 - FILL LINE EXTENTS
 - CUT LINE EXTENTS
 - SURPLUS HAUL

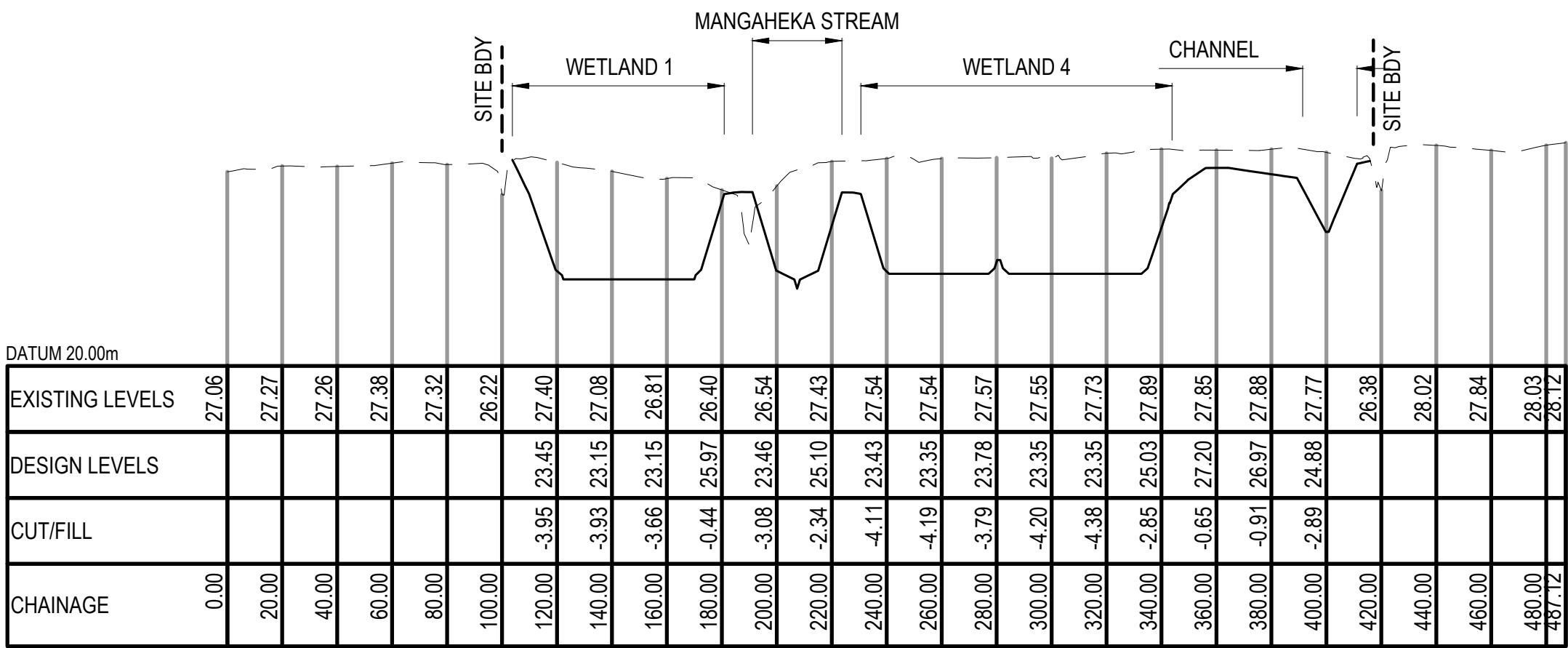
Rev	Revisions	By	Date
A	RESOURCE CONSENT	JD	08/2026
1	Survey	MAVEN	10/2025
2	Design	JD	08/2026
3	Drawn	HN	08/2026
4	Checked	RW	08/2026

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maven@maaven.co.nz
3 Queens Road, Epsom
Auckland 1020

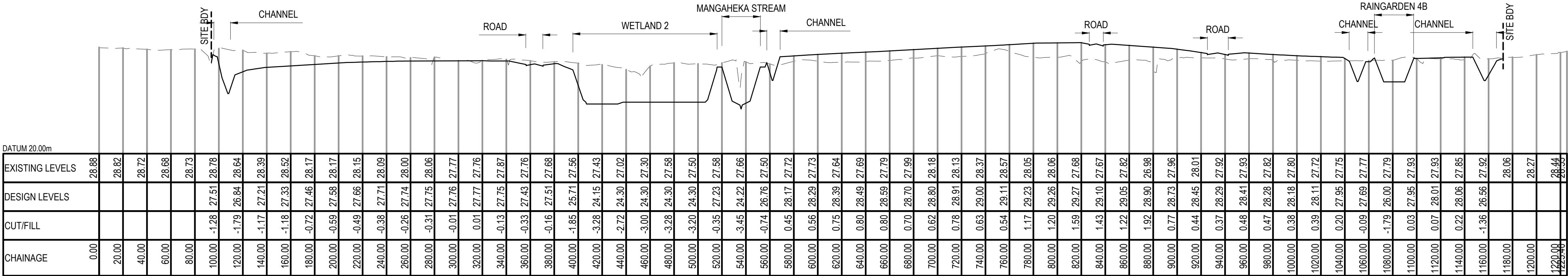
Project: **PROPOSED INDUSTRIAL DEVELOPMENT AT TE KOWHAI EAST FOR TE KOWHAI EAST LIMITED PARTNERSHIP**

Title: **PROPOSED EARTHWORKS PHASING PLAN**

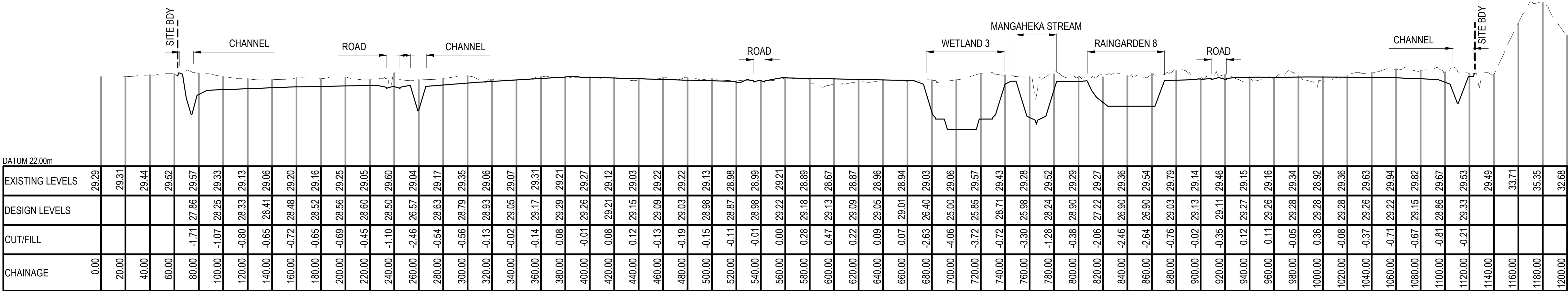
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Cad file: 180010-C221-EWP PHASING.DWG
Drawing no: C221 Rev: A



EARTHWORKS SECTION 1
SCALE: 1:2000 H / 1:200 V



EARTHWORKS SECTION 2
SCALE: 1:2000 H / 1:200 V



EARTHWORKS SECTION 3
SCALE: 1:2000 H / 1:200 V

- NOTES
1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO DISTRICT COUNCIL/HAWAII STANDARD DETAILS AND THE WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATION.
 2. COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000
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 4. ORIGIN OF LEVELS = BP 3 SO 468570 (EMDK)
 5. PUBLISHED RL=38.59. SOURCED FROM THE LINZ DIGITAL GEODETIC DATABASE.
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 12. SEDIMENT CONTROL TO COMPLY WITH TR209/02 STANDARDS.

LEGEND
--- EX GROUND LEVEL
--- PR GROUND LEVEL

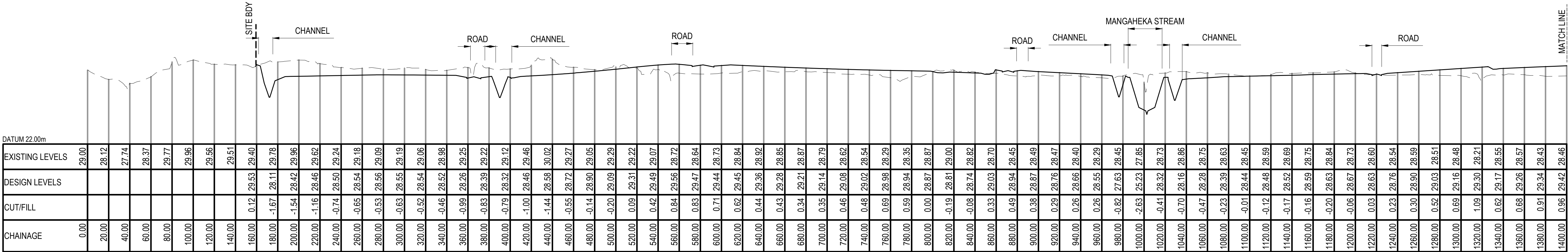
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Revised	By	By	Date
Survey	MAVEN		10/2025
Design	HN		08/2026
Drawn	SP		08/2026
Checked	RW		08/2026



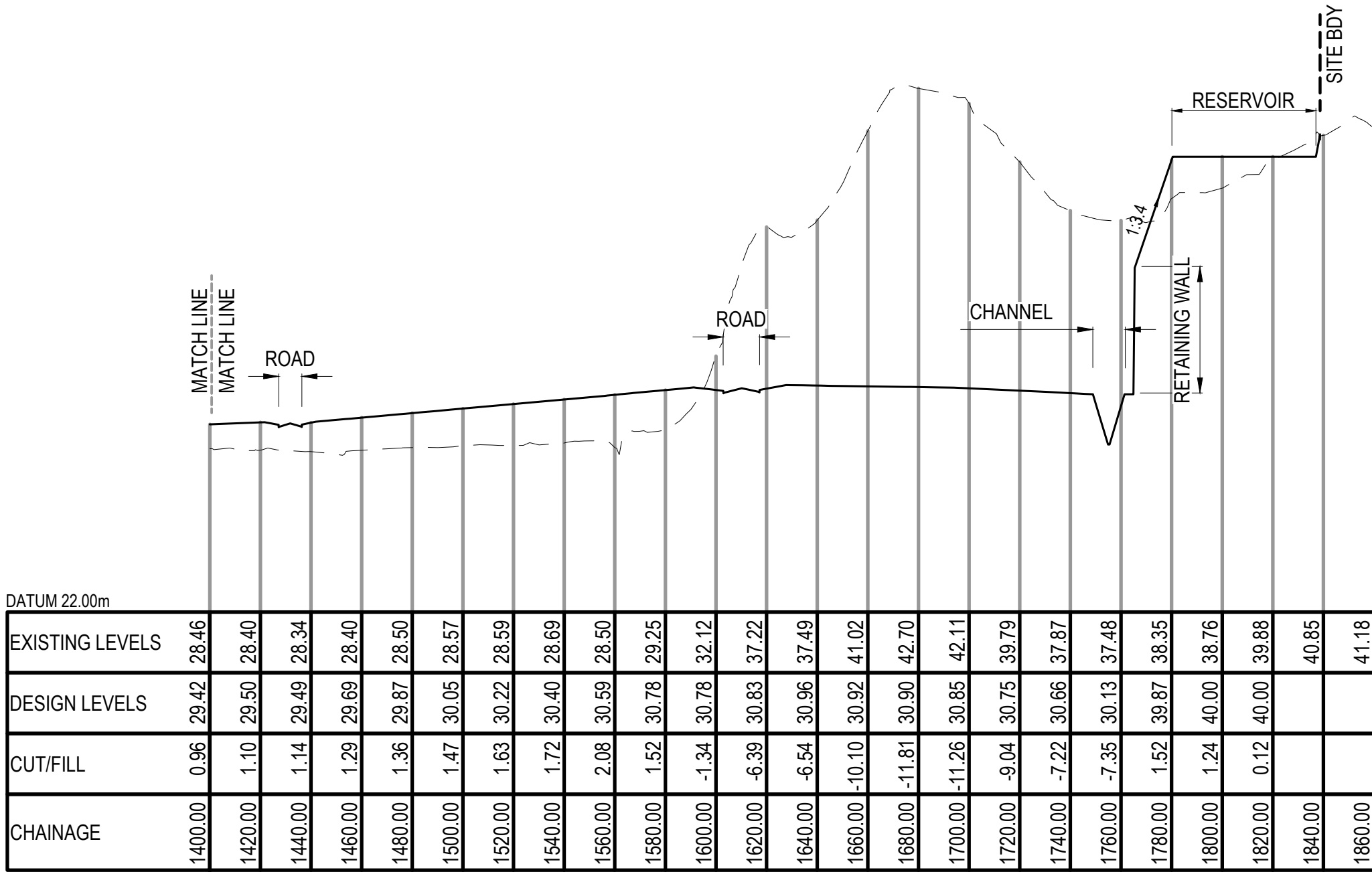
Project
PROPOSED INDUSTRIAL DEVELOPMENT AT TE KOWHAI EAST FOR TE KOWHAI EAST LIMITED PARTNERSHIP

Title
PROPOSED SITE EARTHWORKS SECTIONS

Project no.	180010
Scale	AS SHOWN @ A1
Cad file	180010-C225-EIN-DWG
Drawing no.	C225
Rev	A



EARTHWORKS SECTION 4
SCALE: 1:2000 H / 1:200 V



EARTHWORKS SECTION 4
SCALE: 1:2000 H / 1:200 V

- NOTES
- ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO DISTRICT COUNCIL/IAWAH STANDARD DETAILS AND THE WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATION.
 - COORDINATES IN TERMS OF NZ GEODETIC DATUM MT EDEN 2000
 - LEVELS IN TERMS OF THE NEW ZEALAND VERTICAL DATUM 2016.
 - ORIGIN OF LEVELS = BP 3 SO 468570 (EMDK)
 - PUBLISHED RL=38.59, SOURCED FROM THE LINZ DIGITAL GEODETIC DATABASE.
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 - SEDIMENT CONTROL TO COMPLY WITH TR2009/02 STANDARDS.

LEGEND
--- EX GROUND LEVEL
--- PR GROUND LEVEL

Rev	Revisions	By	Date
A	RESOURCE CONSENT	HN	08/2026

Survey	MAVEN	10/2025
Design	HN	08/2026
Drawn	SP	08/2026
Checked	RW	08/2026



Project
PROPOSED INDUSTRIAL DEVELOPMENT AT TE KOWHAI EAST FOR TE KOWHAI EAST LIMITED PARTNERSHIP

Title
PROPOSED SITE EARTHWORKS SECTIONS

Project no.	180010
Scale	AS SHOWN @ A1
Cad file	180010-C225-1RW.DWG
Drawing no.	C225-1
Rev	A



LOT 6
DP 348435

LOT 3
DP 397443

LOT 2
DP 397443

LOT 1
DP 397443

LOT 4
DP 397443

LOT 5
DP 397443

LOT 6
DP 397443

SRP 6
BASE SIZE: 16.05m x 48.15m
BASE RL: 24.05m
TOTAL VOL: 1500m³
DEPTH 1.5m
CONTRIBUTING CATCHMENTS
P2-6 TO P2-10

C231- SECTION A

SRP 2A
BASE SIZE: 11.91m x 35.75m
BASE RL: 24.90m
TOTAL VOL: 900m³
DEPTH 1.5m
CONTRIBUTING CATCHMENTS
PS1-1

C231-SECTION B

SRP 2
BASE SIZE: 16.05m x 48.15m
BASE RL: 24.05m
TOTAL VOL: 1500m³
DEPTH 1.5m
CONTRIBUTING CATCHMENTS
P1B-1 TO P1B-4, P1A8

SRP 3
BASE SIZE: 16.05m x 48.15m
BASE RL: 25.00m
TOTAL VOL: 1500m³
DEPTH 1.5m
CONTRIBUTING CATCHMENTS
P1A-7, P1B-7, PS2 - 1, P2-SW1
(STREAMWORKS)

C231-SECTION C

SRP 1
BASE SIZE: 16.05m x 48.15m
BASE RL: 25.90m
TOTAL VOL: 1500m³
DEPTH 1.5m
CONTRIBUTING CATCHMENTS
P1A - 1 TO P1A - 3

SRP 5
BASE SIZE: 16.05m x 48.15m
BASE RL: 26.50m
TOTAL VOL: 1500m³
DEPTH 1.5m
CONTRIBUTING CATCHMENTS
P2-1 TO P2-5

SRP 8
BASE SIZE: 16.05m x 48.15m
BASE RL: 28.50m
TOTAL VOL: 1500m³
DEPTH 1.5m
CONTRIBUTING CATCHMENTS
P3 - 7 TO P3 - 8

SRP 7
BASE SIZE: 16.05m x 48.15m
BASE RL: 26.50m
TOTAL VOL: 1500m³
DEPTH 1.5m
CONTRIBUTING CATCHMENTS
P3 - 1 TO P3 - 6

SRP 4
BASE SIZE: 16.05m x 48.15m
BASE RL: 26.80m
TOTAL VOL: 1500m³
DEPTH 1.5m
CONTRIBUTING CATCHMENTS
P1A-4 TO P1A-6, PS3 - 1
(STREAMWORKS)

SRP 9
BASE SIZE: 16.05m x 48.15m
BASE RL: 26.90m
TOTAL VOL: 1500m³
DEPTH 1.5m
CONTRIBUTING CATCHMENTS
P4-1 TO P4 - 4

RESOURCE CONSENT

- NOTES
1. ALL WORKS TO BE IN ACCORDANCE WITH WAIKATO DISTRICT COUNCIL/IAWAI STANDARD DETAILS AND THE WAIKATO REGIONAL INFRASTRUCTURE TECHNICAL SPECIFICATION.
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- LEGEND
- EX BDY
 - PROP BDY
 - EX MAJOR CONTOUR
 - EX MINOR CONTOUR
 - EX CULVERT
 - EX STREAM
 - STREAM DEWATERING
 - PR MAJOR CONTOUR
 - PR MINOR CONTOUR
 - PR STREAMWORKS EXT
 - PR STREAM DIVERSION
 - PR CLEANWATER
 - PR DIRTY WATER
 - PR SILT FENCE
 - PR DECANT
 - PR DECANT BAR
 - PR SEDIMENT RETENTION POND
 - PR MODIFIED STREAM

A RESOURCE CONSENT		ID	08/2026
Rev	Revisions	By	Date
	By	Date	
Survey	MAVEN	10/2025	
Design	ID	08/2026	
Drawn	ID	08/2026	
Checked	RW	08/2026	

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Project
PROPOSED INDUSTRIAL DEVELOPMENT AT TE KOWHAI EAST FOR TE KOWHAI EAST LIMITED PARTNERSHIP

Title
PROPOSED SEDIMENT EROSION CONTROL PLAN

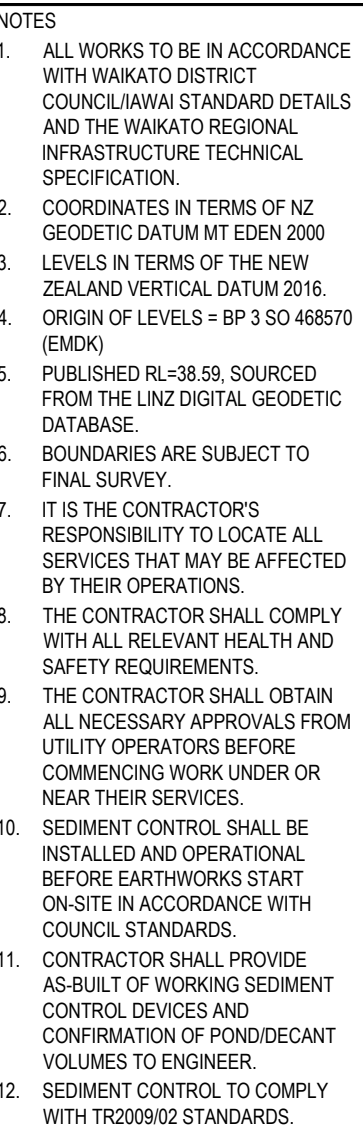
Project no
180010

Scale
1:4000 @ A1

Cad file
180010-C231-SDP.DWG

Drawing no
C230

Rev
A



LEGEND

PR EXTENT WORK
EX BDY
PR MAJOR CONTOUR
PR MINOR CONTOUR
EX CULVERT

A	FOR INFORMATION	HN	06/2026		
Ref	Revisions	By	Date		
	By		Date		
Survey	MAVEN		10/2025		
Design	HN		10/2025		
Drawn	SP		10/2025		
Checked	RW		07/2026		



**PROPOSED INDUSTRIAL
DEVELOPMENT AT
TE KOWHAI EAST
FOR TE KOWHAI EAST
LIMITED PARTNERSHIP**

PROPOSED EARTHWORKS CONTOUR PLAN

Project no.	180010		
Scale	1:500 @ A1		
Cad file	180010-C200 EW FOR INFO.DWG		
Drawing no.	C206	Rev	A

S (2026) Distribution Airbus DS

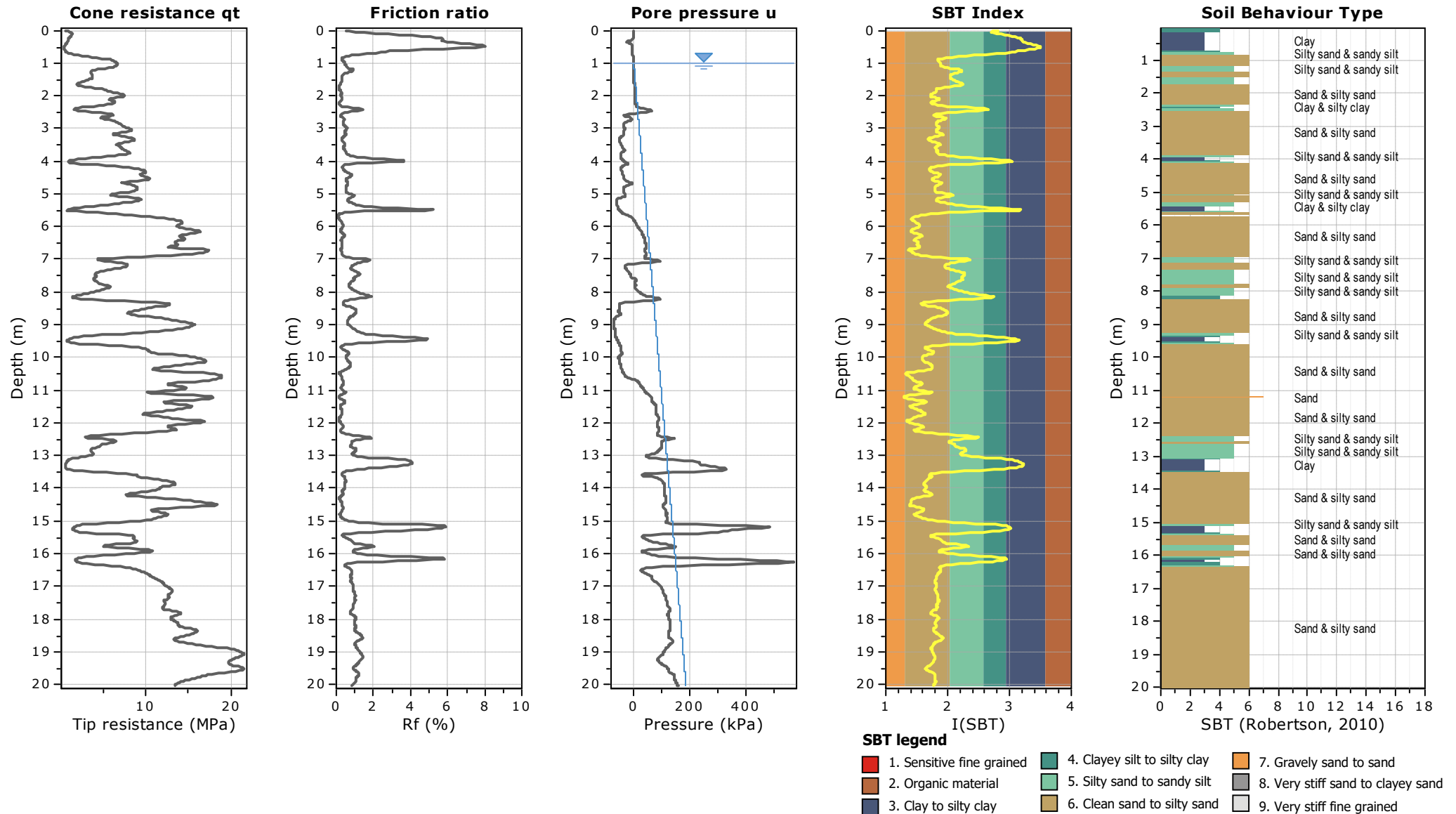
APPENDIX C

Previous Geotechnical Investigation



Project: HD1996 - Te Kowhai Properties

Location: Te Kowhai





HD Geo

www.hdgeo.co.nz

Project: HD1996 - Te Kowhai Properties

Location: Te Kowhai

CPT: CPT02, 268 Te Kowhai Road, Te K

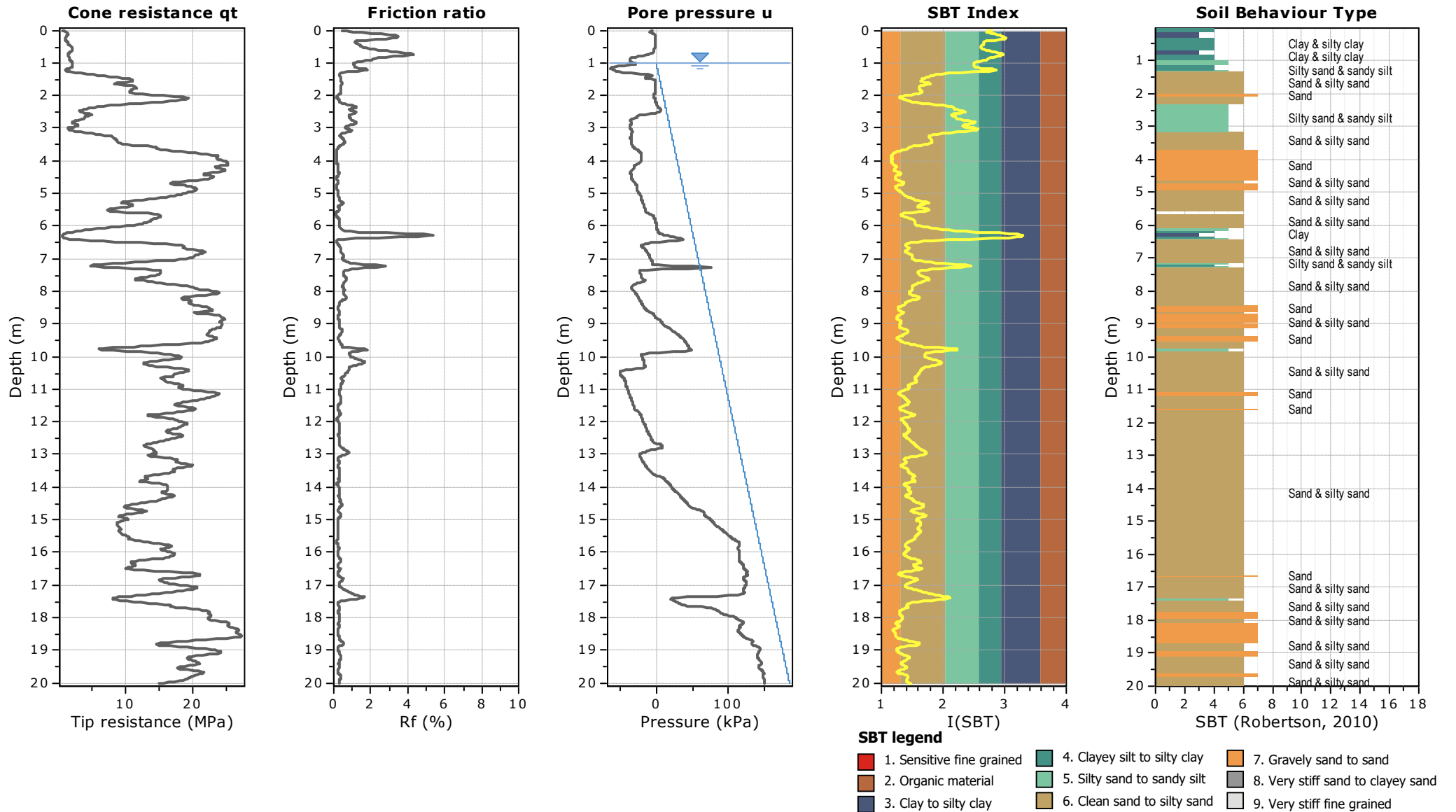
Total depth: 20.02 m, Date: 20/05/2021

Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type:

Cone Operator:





HD Geo

www.hdgeo.co.nz

Project: HD1996 - Te Kowhai Properties

Location: Te Kowhai

CPT: CPT03, 268 Te Kowhai Road, Te K

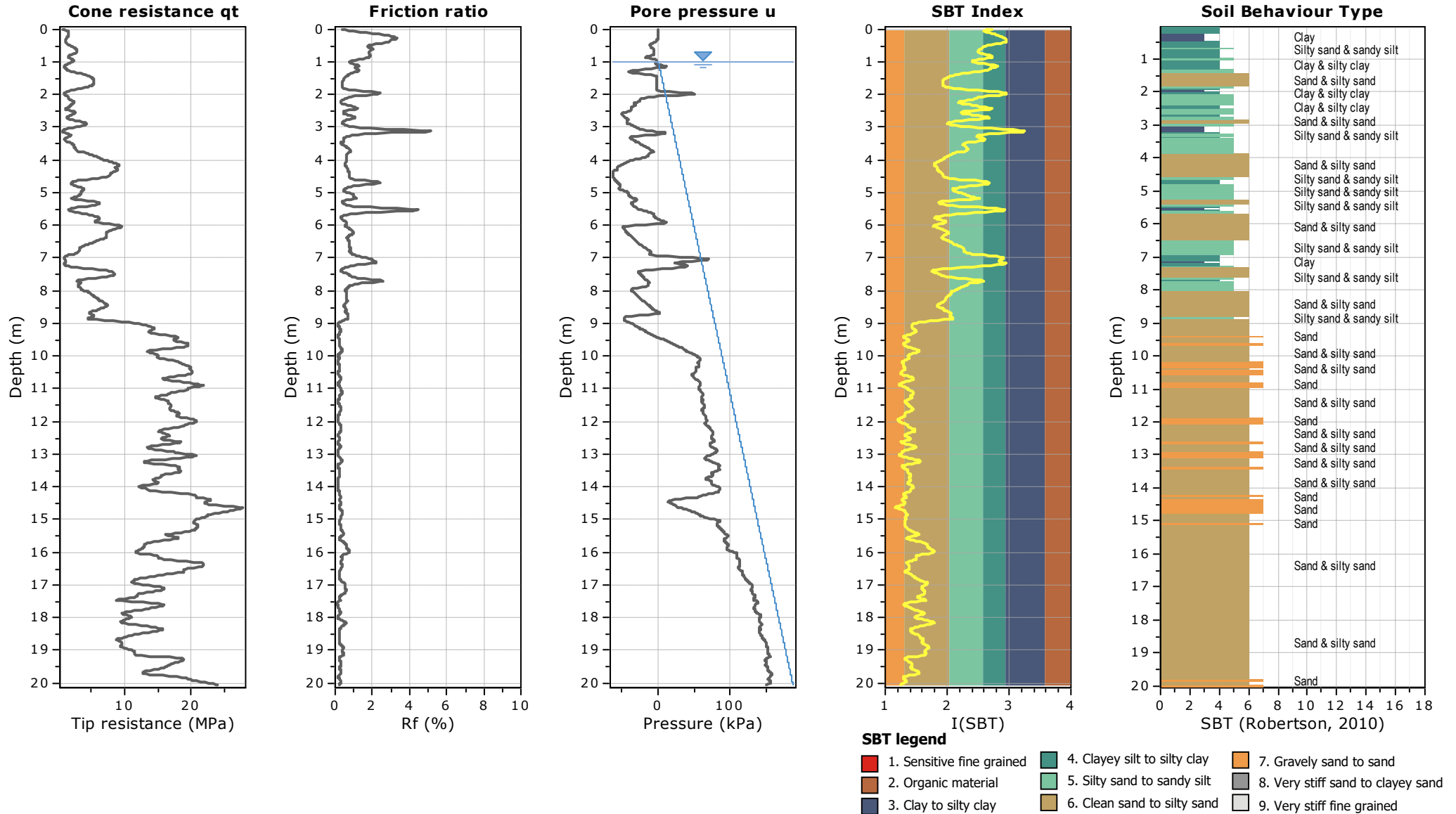
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Surface Elevation: 0.00 m

Coords: X:0.00, Y:0.00

Cone Type:

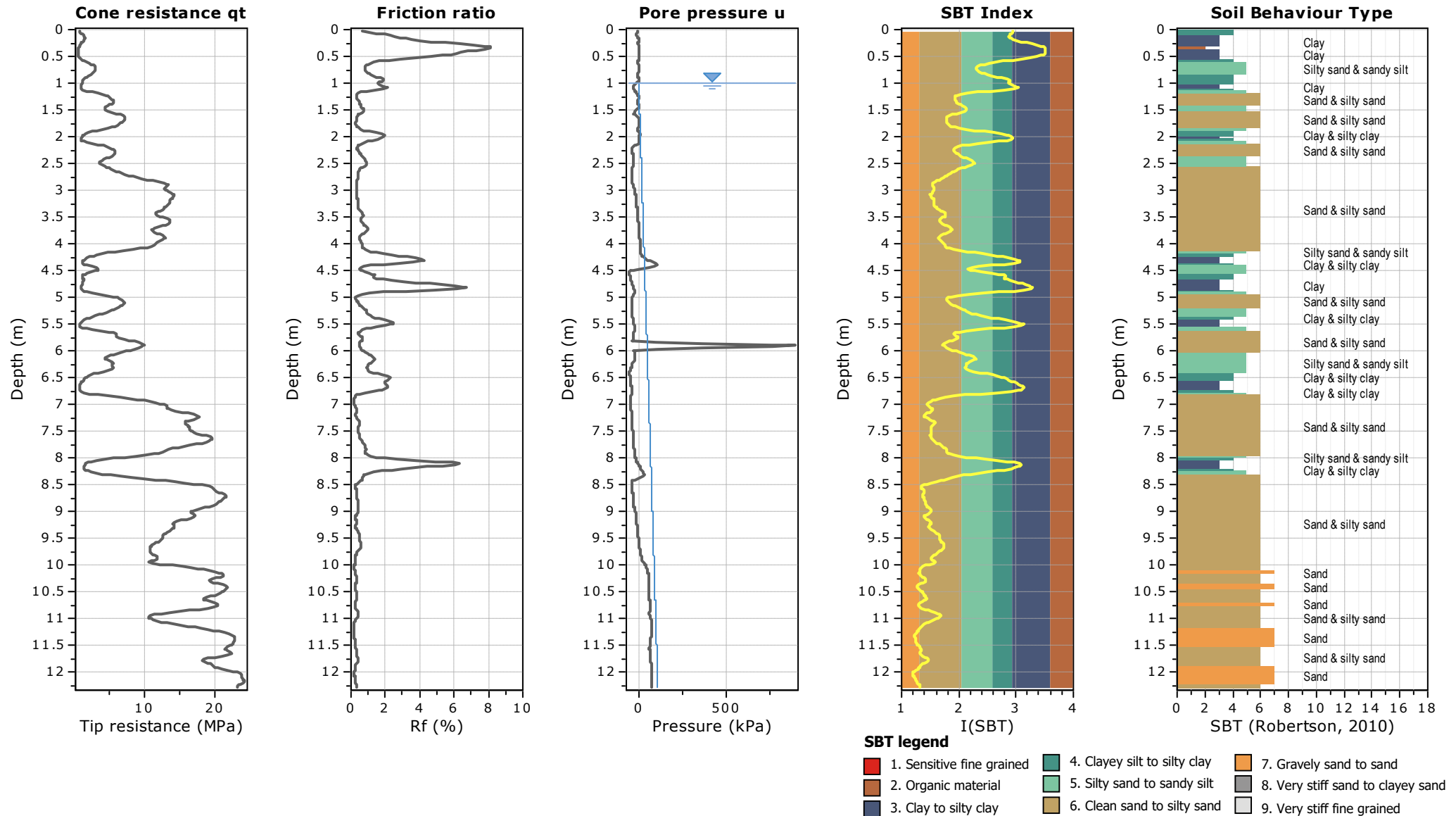
Cone Operator:





Project: HD1996 - Te Kowhai Properties

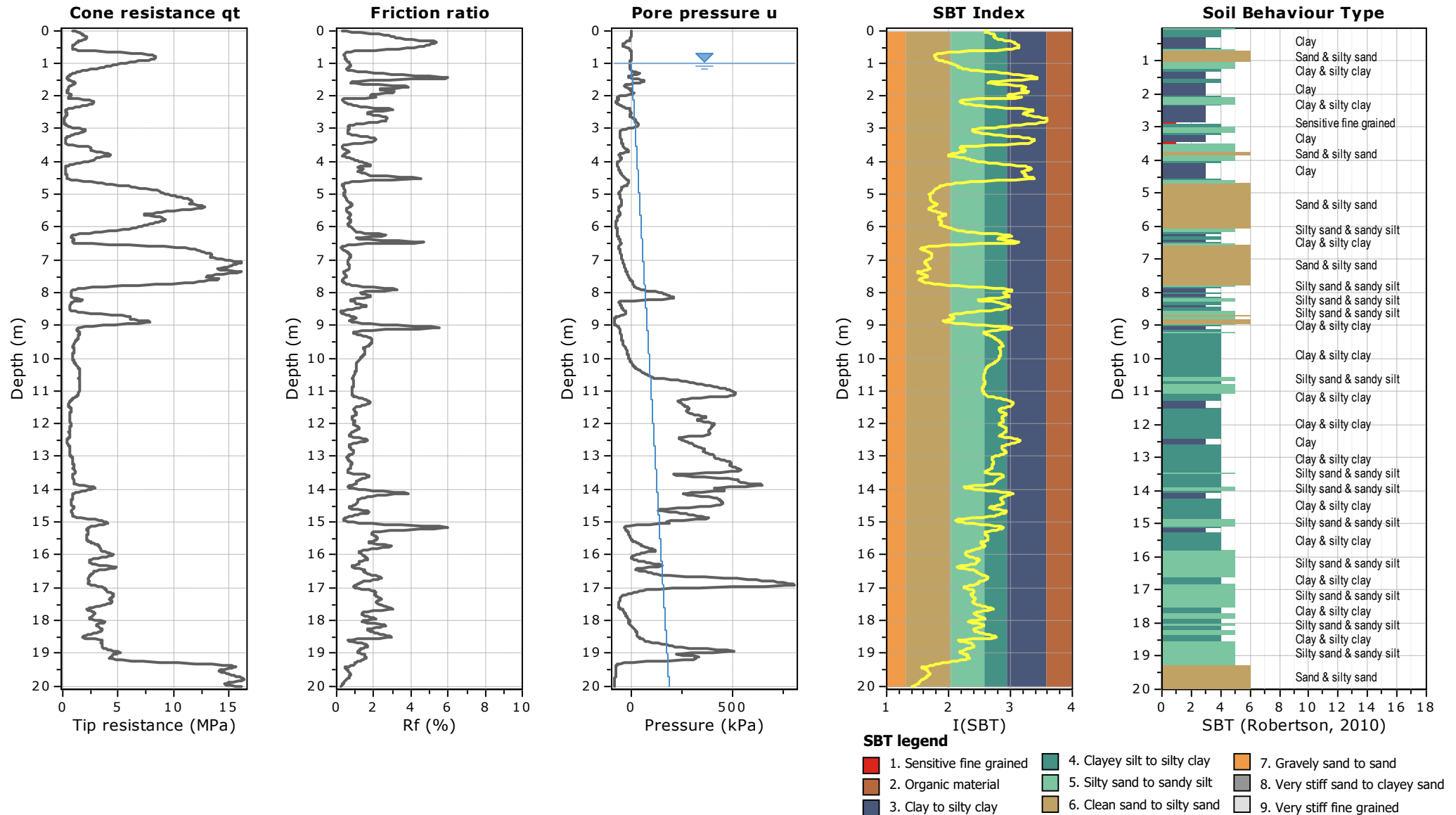
Location: Te Kowhai





Project: HD1996 - Te Kowhai Properties

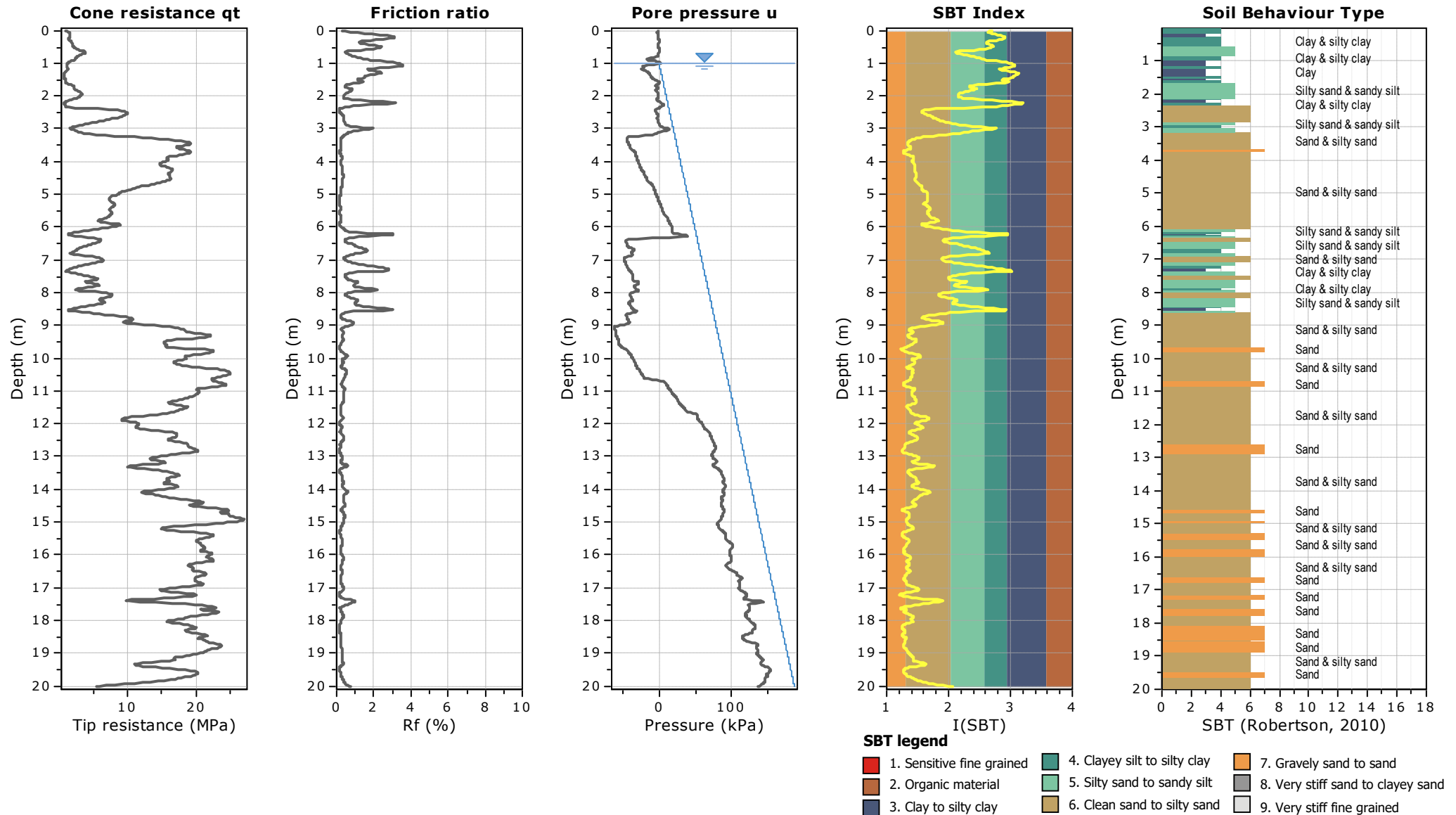
Location: Te Kowhai





Project: HD1996 - Te Kowhai Properties

Location: Te Kowhai



	INVESTIGATION LOG		Job No.: HD1996
	Client: Lysaght		No.: HA01
	Project: Te Kowhai Development		
	Location: By drainage ponds.		Date: 19.05.21
Co-ordinates: 1794242mE, 5822380mN		Logged By: AM	
Elevation: Ground		Checked By: SSA	

Geology	Geological Interpretation (refer to separate Geotechnical and Geological Information sheet for further information)	Depth (m)	Legend	Scala Penetrometer (Blows / 100 mm)	Vane Shear Strength (kPa) Vane: 534	Water
Topsoil	TOPSOIL (OL); dark blackish brown. Moist; trace rootlets.	0.0	1			
		0.2	1			
		0.4	1		148	
Plako Subgroup	CLAY; grayish brown. Stiff; moist; high plasticity.	0.4	2			
		0.6	1		124	
		0.8	1			
		1.0	2			
		1.2	1		108	
		1.4	1			
	Silty SAND; light gray. Very dense; saturated; high dilatancy; well graded; sand, fine to coarse.	1.6	2			
		1.8	7		49	
		2.0	8			
		2.2	8			
		2.4	11			
	Sandy SILT; light gray. Firm to stiff; saturated; sand, fine.	2.6	11			
		2.8	11			
		3.0			31	
		3.2			25	
		3.4			77	
	EOH: 3.00 m	3.6			40	
		3.8			62	
		4.0			46	
		4.2			80	
		4.4			43	
		4.6				

Photo	Remarks			
	End of log at 3.0 m - target depth. <table border="0"> <tr> <td> Shear Vanes Peak Remoulded </td> <td> Water Standing Water Level Out flow In flow </td> <td> Investigation Type ☒ Hand Auger ☐ Investigation Pit ☐ Machine Borehole </td> </tr> </table>	Shear Vanes Peak Remoulded	Water Standing Water Level Out flow In flow	Investigation Type ☒ Hand Auger ☐ Investigation Pit ☐ Machine Borehole
Shear Vanes Peak Remoulded	Water Standing Water Level Out flow In flow	Investigation Type ☒ Hand Auger ☐ Investigation Pit ☐ Machine Borehole		

		INVESTIGATION LOG					Job No.: HD1996	
		Client: Lysaght					No.: HA02	
		Project: Te Kowhai Development					Date: 20.05.21	
		Location: Eastern end of site, 250 m south of farmhouse.					Logged By: MM	
Co-ordinates: 1794348mE, 5821988mN					Checked By: SSA			
Elevation: Ground								
Geology	Geological Interpretation (refer to separate Geotechnical and Geological Information sheet for further information)	Depth (m)	Legend	Scala Penetrometer (Blows / 100 mm)	Vane Shear Strength (kPa) Vane: 1710		Water	
				2 4 6 8 10 12 14 16 18	50 100 150 200 250			
Topsoil	TOPSOIL (OL); dark blackish brown. Moist; trace rootlets.	0.0 - 0.2	TS	2		83		
Volcanic Ash	Clayey SILT (ML); brown. Stiff; moist; non-dilatent, moderately sensitive to sensitive.	0.2 - 0.4	2			16		
		0.4 - 0.6	1			61		
		0.6 - 0.8	1			26		
		0.8 - 1.0	1			13		
Piako Subgroup	PEAT (FIBROUS) (PT); dark brown. Moist to wet; intact wooden fragments, 20 mm to 30 mm length.	1.0 - 1.2	PT	8				
	Clayey SILT (ML); light brownish yellow, mottled orange. Firm; wet; low dilatency, insensitive.	1.2 - 1.4	ML	4		35		
	SAND (SW); light grey. Medium dense; wet; well graded; sand, fine to coarse.	1.4 - 1.6	SW	5		22		
	Silty SAND (SP); light greyish blue. Medium dense; moist; uniformly graded; sand, fine.	1.6 - 1.8	SP	5				
	SAND (SP), with trace silt; light greyish blue. Medium dense; moist; uniformly graded; sand, fine.	1.8 - 2.0	SP	6				
	SILT (ML), with minor sand; light grey. Very stiff; wet; moderate dilatency, moderately sensitive; sand, fine to medium.	2.0 - 2.2	ML	4		115		
	SAND (SW); light grey. Medium dense; wet; well graded; sand, fine to coarse.	2.2 - 2.4	SW	3		29		
	SILT (ML), with minor sand; light grey. Very stiff; wet; moderate dilatency, moderately sensitive; sand, fine to medium.	2.4 - 2.6	ML	3				
	SAND (SW), with minor silt; light grey. Dense; wet; well graded; sand, fine to coarse.	2.6 - 2.8	SW	4				
	EOH: 3.00 m	2.8 - 3.0		12				
		3.0 - 3.2		10				
		3.2 - 3.4		11				
Photo		Remarks						
		End of log at 3 m - target depth. Shear Vanes Peak Remoulded Water Standing Water Level Out flow In flow Investigation Type ☒ Hand Auger ☐ Investigation Pit ☐ Machine Borehole						

		INVESTIGATION LOG					Job No.: HD1996		
		Client: Lysaght Project: Te Kowhai Development					No.: HA03		
		Location: Within paddocks along north-western boundary. Co-ordinates: 1793612mE, 5822253mN Elevation: Ground					Date: 20.05.21 Logged By: MM Checked By: SSA		
Geology	Geological Interpretation (refer to separate Geotechnical and Geological Information sheet for further information)	Depth (m)	Legend	Scala Penetrometer (Blows / 100 mm)				Vane Shear Strength (kPa) Vane: 1710	Water
Topsoil	TOPSOIL (OL); dark blackish brown. Moist; trace rootlets.	-0.2		1	2				
Volcanic Ash	Clayey SILT (ML); brown. Very stiff; moist; non-dilatent, sensitive. 0.5 m: becomes light grey, streaked orange.	-0.4		1				45	
		-0.6		3					
		-0.8		2				179	
Plako Subgroup	SAND (SP), with trace silt; light brown, mottled orange. Loose to medium dense; moist; poorly graded; sand, fine to medium.	-1.0		2					
		-1.2		4					
	Silty SAND (SP); light grey, streaked orange. Medium dense; moist; uniformly graded; sand, fine.	-1.4		3					
		-1.6		5					
	SILT (ML), with minor sand; light grey, streaked orange. Loose to medium dense; moist; non-dilatent; sand, fine to medium.	-1.8		4					
	1.9 m: becomes wet; low dilatency.	-2.0		3					
	SAND (SW), with trace silt; grey. Medium dense; wet; well graded; sand, fine to coarse.	-2.2		3					
		-2.4		4				108	
	SILT (ML), with some clay; grey. Very stiff; wet; low to moderate dilatency, moderately sensitive.	-2.6		5				35	
		-2.8		4					
	EOH: 3.00 m	-3.0		12					
Photo		Remarks							
		End of log at 3 m - target depth.							
		Shear Vanes		Water		Investigation Type			
		 Peak		 Standing Water Level		☒ Hand Auger			
		 Remoulded		 Out flow		☐ Investigation Pit			
				 In flow		☐ Machine Borehole			

		INVESTIGATION LOG				Job No.: HD1996		
		Client: Lysaght				No.: HA04		
		Project: Te Kowhai Development						
		Location: West of area boundary.				Date: 19.05.21		
		Co-ordinates: 1793321mE, 5821972mN				Logged By: AM		
		Elevation: Ground				Checked By: SSA		
Geology	Geological Interpretation (refer to separate Geotechnical and Geological Information sheet for further information)	Depth (m)	Legend	Scala Penetrometer (Blows / 100 mm)	Vane Shear Strength (kPa) Vane: 534	Water		
Topsail	TOPSOIL (OL); dark blackish brown. Moist; trace rootlets.	0.0 0.2 0.4	TS TS TS	2 2 1 1 1	108 34			
Volcanic Ash	Clayey SILT; light brown. Stiff; moist.	0.6 0.8	TS TS	1 2	99 19			
Piako Subgroup	SILT, with minor clay; light gray. Stiff; moist.	1.0 1.2	TS TS	1 3 2 2	133 37 120			
	Silty SAND; light gray. Very loose to loose; moist; moderate dilatency; well graded; sand, fine to coarse.	1.4 1.6	TS TS	1 2 4 8	46 139 34			
	Silty CLAY, with trace sand; light gray. Very stiff; moist to wet; moderate plasticity; sand, fine.	1.8 2.0 2.2	TS TS TS	6 6 7 6 4 5 5	UTP	2 m		
	SAND, with some silt; light gray. Medium dense; moist; high dilatency; well graded; sand, fine to coarse.	2.4 2.6 2.8	TS TS TS	10 8 9 8				
	Sandy SILT; light gray. Medium dense to dense; saturated; high dilatency.	3.0 3.2 3.4	TS TS TS	7 3 5 10 8 8				
	EOH: 2.80 m							
	Photo		Remarks					
			End of log at 2.8 m. Borehole collapse.					
			Shear Vanes		Water		Investigation Type	
			 Peak		 Standing Water Level		☒ Hand Auger	
		 Remoulded		 Out flow		☐ Investigation Pit		
				 In flow		☐ Machine Borehole		

		INVESTIGATION LOG				Job No.: HD1996	
		Client: Lysaght				No.: HA05	
		Project: Te Kowhai Development				Date: 19.05.21	
		Location: End of farm race, center of area boundary.				Logged By: AM	
		Co-ordinates: 1793864mE, 5821829mN				Checked By: SSA	
		Elevation: Ground					
Geology	Geological Interpretation (refer to separate Geotechnical and Geological Information sheet for further information)	Depth (m)	Legend	Scala Penetrometer (Blows / 100 mm)	Vane Shear Strength (kPa) Vane: 534		Water
				2 4 6 8 10 12 14 16 18	50 100 150 200 250		
Topsoil	TOPSOIL (OL); dark blackish brown. Moist; trace rootlets.	0.0 - 0.2	1	2	80		
Plako Subgroup	Clayey SILT; light brown. Stiff; moist; low plasticity.	0.2 - 0.4	1	1	28		
	SILT, with some sand, with trace clay; light grey with minor mottling. Very loose to loose; moist; non-plastic.	0.4 - 0.6	1	2	154		
		0.6 - 0.8	2	2	154		
		0.8 - 1.0	2	2	105		
	Sandy CLAY; light grey. Stiff; moist; well graded; sand, fine to coarse.	1.0 - 1.2	2	2	105		
		1.2 - 1.4	2	3	105		
	Silty CLAY, with trace sand; light grey, mottled. Stiff to very stiff; moist; low dilatancy.	1.4 - 1.6	3	5	139		
		1.6 - 1.8	5	5	111		
	Clayey SILT; light grey. Stiff to very stiff; wet to saturated; high dilatancy.	1.8 - 2.0	4	6	105		
		2.0 - 2.2	3	8	105		
		2.2 - 2.4	4	9	105		
	SILT, with minor sand; greyish. Stiff to very stiff; saturated; high dilatancy; sand, fine.	2.4 - 2.6	6	5	105		
		2.6 - 2.8	5	6	105		
		2.8 - 3.0	6	8	105		
	EOH: 3.00 m	3.0 - 3.2	9		105		
		3.2 - 3.4					
Photo			Remarks				
			End of log at 3 m - target depth.				
			Shear Vanes Peak Remoulded Water Standing Water Level Out flow In flow Investigation Type ☒ Hand Auger ☐ Investigation Pit ☐ Machine Borehole				

	INVESTIGATION LOG		Job No.: HD1996
	Client: Lysaght		No.: HA06
	Project: Te Kowhai Development		
	Location: Western extent of site, south of drainage trench.		Date: 20.05.21
Co-ordinates: 1793107mE, 5821853mN		Logged By: MM	
Elevation: Ground		Checked By: SSA	

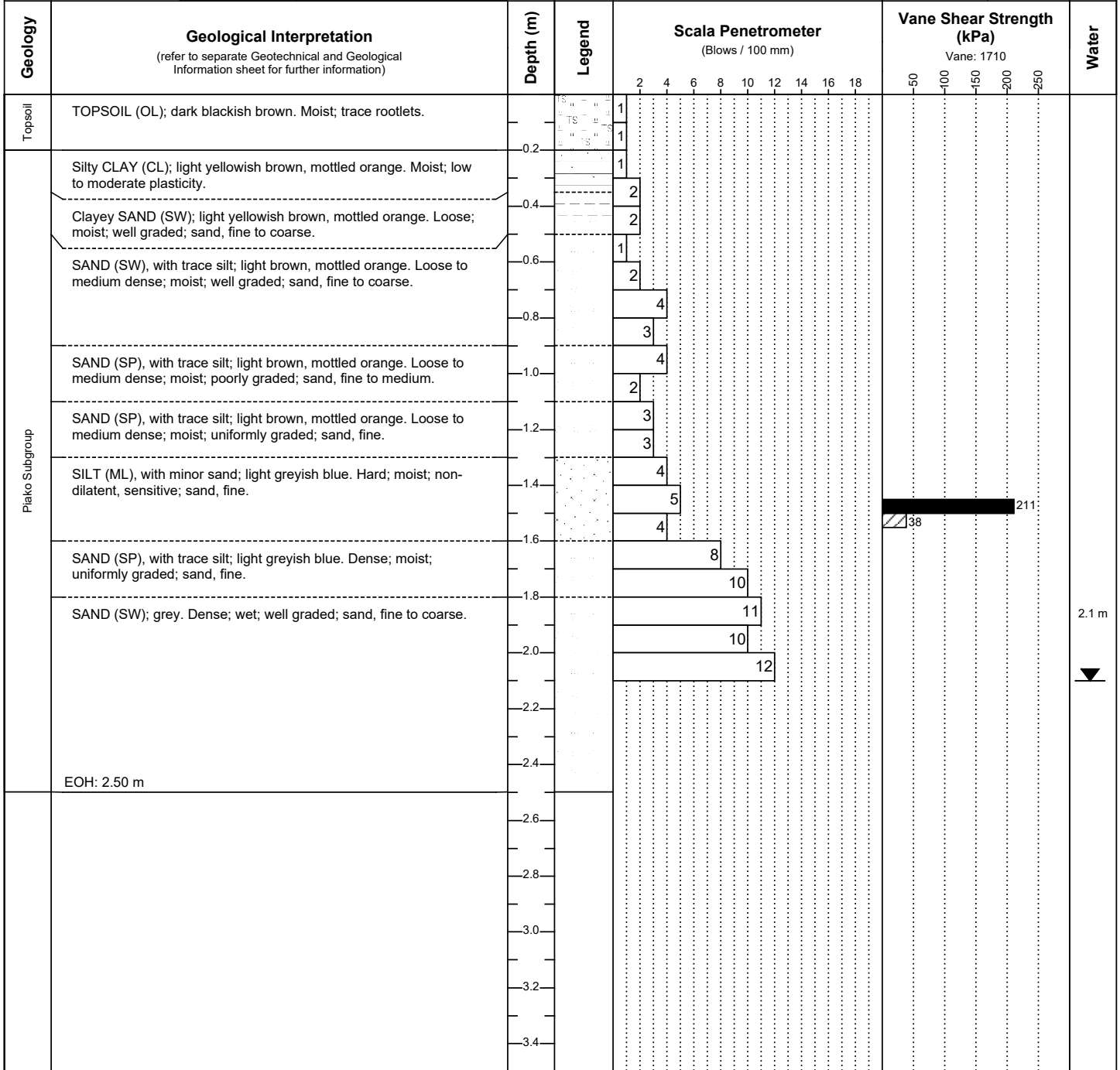


Photo	Remarks
	End of log at 2.5 m - material collapse within borehole. Shear Vanes Peak Remoulded Water Standing Water Level Out flow In flow Investigation Type ☒ Hand Auger ☐ Investigation Pit ☐ Machine Borehole

		INVESTIGATION LOG				Job No.: HD1996	
		Client: Lysaght				No.: HA07	
		Project: Te Kowhai Development				Date: 19.05.21	
		Location: In silage paddock.				Logged By: AM	
		Co-ordinates: 1793657mE, 5821419mN				Checked By: SSA	
		Elevation: Ground					
Geology	Geological Interpretation (refer to separate Geotechnical and Geological Information sheet for further information)	Depth (m)	Legend	Scala Penetrometer (Blows / 100 mm)	Vane Shear Strength (kPa) Vane: 534		Water
Topsoil	TOPSOIL (OL); dark blackish brown. Moist; trace rootlets.	0.0 - 0.2	1	1	77		
Plako Subgroup	Silty CLAY; light brown. Stiff; moist; moderate plasticity.	0.2 - 0.4	2	2	25		
	Sandy SILT; light grey, mottled. Loose to medium dense; moist; non-plastic.	0.4 - 0.6	2	3	173		
		0.6 - 0.8	2	3	108		
	SAND; light greyish yellow. Medium dense; moist; well graded; sand, fine to coarse.	0.8 - 1.0	3	3	46		
	Silty SAND; light grey. Medium dense; wet; moderate dilatency; sand, fine to coarse.	1.0 - 1.2	3	3			
		1.2 - 1.4	3	5			
		1.4 - 1.6	5	6			
	Sandy SILT; greyish blue. Medium dense; moist to wet; non-plastic.	1.6 - 1.8	6	5			
		1.8 - 2.0	5	5			
	Sandy SILT; greyish blue. Medium dense; saturated; moderate dilatency.	2.0 - 2.2	7	6			
	SAND, with some silt; greyish blue. Dense; saturated; well graded; sand, fine to coarse.	2.2 - 2.4	10	10			
	EOH: 2.30 m	2.4 - 2.6	16				
		2.6 - 2.8					
		2.8 - 3.0					
Photo		Remarks					
		End of log at 2.3 m - material collapse within borehole					
		Shear Vanes Peak Remoulded		Water Standing Water Level Out flow In flow		Investigation Type ☒ Hand Auger ☐ Investigation Pit ☐ Machine Borehole	

		INVESTIGATION LOG					Job No.: HD1996											
		Client: Lysaght					No.: HA08											
		Project: Te Kowhai Development																
		Location: Far south of area boundary, by tennis court.					Date: 19.05.21											
		Co-ordinates: 1793854mE, 5820887mN					Logged By: AM											
		Elevation: Ground					Checked By: SSA											
Geology	Geological Interpretation (refer to separate Geotechnical and Geological Information sheet for further information)	Depth (m)	Legend	Scala Penetrometer (Blows / 100 mm)					Vane Shear Strength (kPa) Vane: 534		Water							
Topsoil	TOPSOIL (OL); dark blackish brown. Moist; trace rootlets.			2	4	6	8	10	12	14	16	18	50	100	150	200	250	
Piako Subgroup	Silty CLAY; light greyish white. Very stiff; moist; low plasticity; clay, dark red mottled.	0.2	1	1														201
		0.4	3	4										46				
	Sandy SILT; light greyish white. Medium dense; moderate dilatancy; silt, orange mottled.	0.6	4	4										39				185
		0.8	8	7														173
		1.0	7	8										49				
	Gravelly SAND; greyish blue. Dense; moist; well graded; sand, fine to coarse; gravel, fine to medium.	1.2	8	8														
		1.4	9	7														
		1.6	11	12														
	Gravelly SAND; greyish. Dense; saturated; sand, fine to coarse; gravel, fine to medium.	1.8	10	8														
		2.0	9	9														
EOH: 2.10 m		2.2	7	3	4													
		2.4	7	6	6													
		2.6	8	10														
		2.8	10															
		3.0																
		3.2																
		3.4																
Photo			Remarks															
			End of log at 2.1 m - material collapse within borehole															
			Shear Vanes		Water		Investigation Type											
			 Peak		 Standing Water Level		☒ Hand Auger											
			 Remoulded		 Out flow		☐ Investigation Pit											
					 In flow		☐ Machine Borehole											