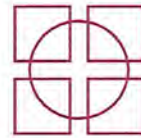


# FORMER TOKANUI HOSPITAL

## DEMOLITION AND REMEDIATION PROJECT

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND



Fraser  
Thomas

33097

RESOURCE CONSENT

ISSUE SET 3

21/11/24

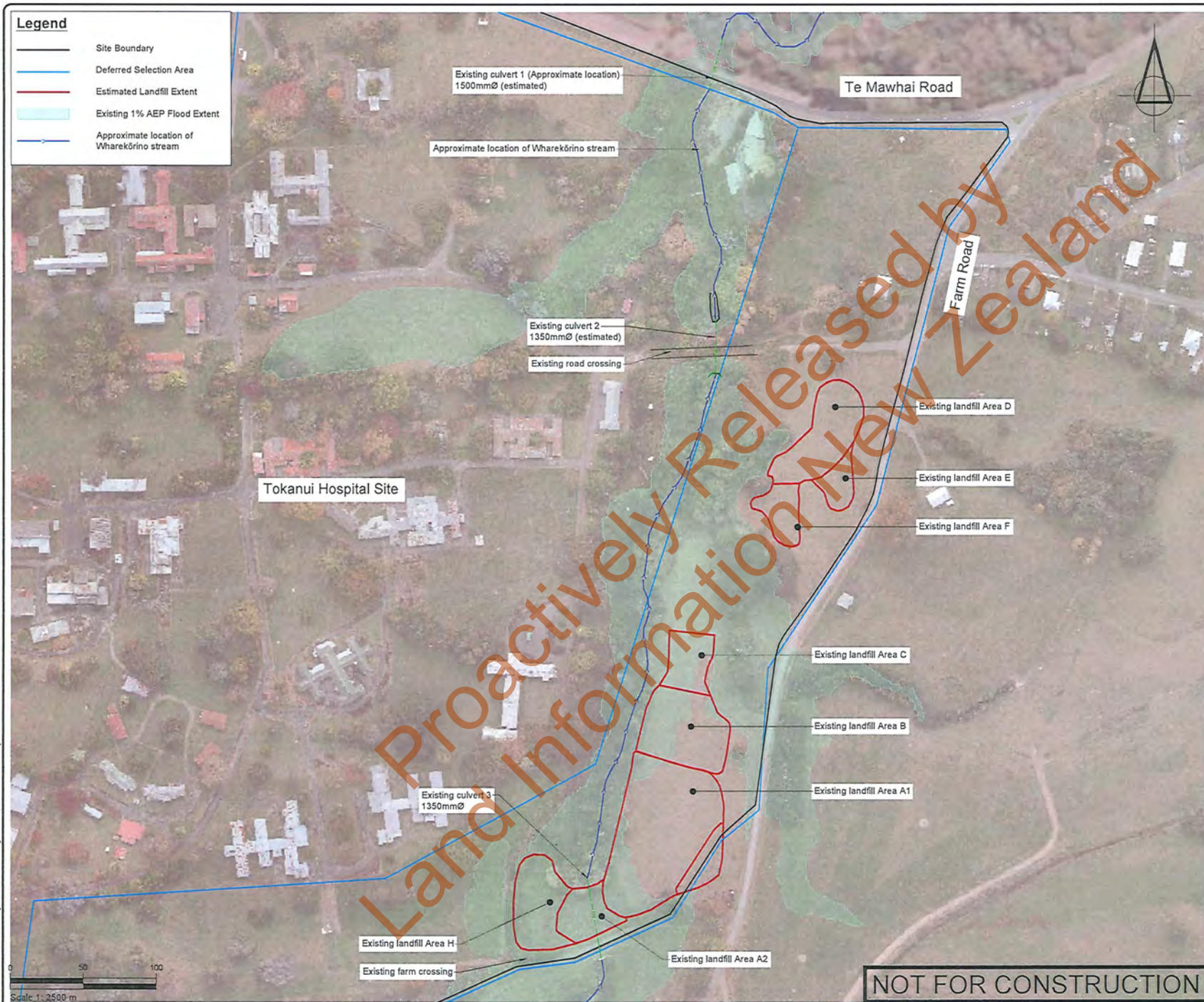
### LIST OF DRAWINGS

DRAWING	DRAWING TITLE	ISSUE SET	1	2	3
33097/LF001	EXISTING LANDFILL OVERVIEW PLAN	-	-	-	-
33097/LF002	INTRUSIVE GROUND INVESTIGATION TEST PIT LOCATION PLAN 1 OF 3	-	-	-	-
33097/LF003	INTRUSIVE GROUND INVESTIGATION TEST PIT LOCATION PLAN 2 OF 3	-	-	-	-
33097/LF004	INTRUSIVE GROUND INVESTIGATION TEST PIT LOCATION PLAN 3 OF 3	-	-	-	-
33097/LF010	PROPOSED LANDFILL REMEDIAL WORKS SITE OVERVIEW PLAN	-	-	-	-
33097/LF100	EXISTING LANDFILL AREAS D, E AND F PLAN	-	-	-	-
33097/LF110	PROPOSED NORTHERN DISPOSAL SITE CELL PROPOSED FINAL DESIGN PLAN	-	-	-	-
33097/LF120	PROPOSED NORTHERN DISPOSAL SITE CELL BASE OF CELL LEVELS PLAN	-	-	-	A
33097/LF121	PROPOSED NORTHERN DISPOSAL SITE CELL FINISHED GROUND LEVELS PLAN	-	-	-	-
33097/LF130	PROPOSED NORTHERN DISPOSAL SITE CELL CROSS SECTIONS	-	-	-	-
33097/LF140	PROPOSED NORTHERN DISPOSAL SITE CELL CELL FORMATION CUT AND FILL PLAN	-	-	-	-
33097/LF141	PROPOSED NORTHERN DISPOSAL SITE CELL FILLING PLAN	-	-	-	-
33097/LF190	PROPOSED NORTHERN DISPOSAL SITE CELL EROSION AND SEDIMENT CONTROL PLAN PHASE 1	-	-	-	-
33097/LF191	PROPOSED NORTHERN DISPOSAL SITE CELL EROSION AND SEDIMENT CONTROL PLAN PHASE 2	-	-	-	-
33097/LF200	EXISTING LANDFILL AREAS A1, B, AND C PLAN	-	-	-	-
33097/LF210	PROPOSED SOUTHERN DISPOSAL SITE CELL PROPOSED FINAL DESIGN PLAN	-	-	-	A
33097/LF219	PROPOSED SOUTHERN DISPOSAL SITE CELL PROPOSED TOE BUND PLAN	-	-	-	-
33097/LF220	PROPOSED SOUTHERN DISPOSAL SITE CELL BASE OF CELL LEVELS PLAN	-	-	-	A

33097/LF221	PROPOSED SOUTHERN DISPOSAL SITE CELL FINISHED GROUND LEVELS PLAN	-	-	A
33097/LF230	PROPOSED SOUTHERN DISPOSAL SITE CELL CROSS SECTIONS SHEET 1	-	-	A
33097/LF231	PROPOSED SOUTHERN DISPOSAL SITE CELL CROSS SECTIONS SHEET 2	-	-	-
33097/LF238	PROPOSED SOUTHERN DISPOSAL SITE CELL REFUSE EXCAVATION PLAN	-	-	-
33097/LF239	PROPOSED SOUTHERN DISPOSAL SITE CELL TOE BUND CONSTRUCTION PLAN	-	-	-
33097/LF240	PROPOSED SOUTHERN DISPOSAL SITE CELL CELL FORMATION CUT AND FILL PLAN	-	-	A
33097/LF241	PROPOSED SOUTHERN DISPOSAL SITE CELL REFUSE FILLING PLAN	-	-	A
33097/LF250	PROPOSED SOUTHERN DISPOSAL SITE CELL GROUNDWATER DRAIN LONG SECTION AND DETAIL	-	-	A
33097/LF289	PROPOSED SOUTHERN DISPOSAL SITE CELL EROSION AND SEDIMENT CONTROL PLAN PHASE 0	-	-	-
33097/LF290	PROPOSED SOUTHERN DISPOSAL SITE CELL EROSION AND SEDIMENT CONTROL PLAN PHASE 1	-	-	A
33097/LF291	PROPOSED SOUTHERN DISPOSAL SITE CELL EROSION AND SEDIMENT CONTROL PLAN PHASE 2	-	-	A
33097/LF300	EXISTING LANDFILL AREAS A2 AND AREA H, AND EXISTING CULVERT 3 PLAN	-	-	-
33097/LF310	AREAS A2/H & CULVERT 3 PROPOSED FINAL DESIGN PLAN	-	-	A
33097/LF311	INDICATIVE VEGETATION REMOVAL PLAN	-	-	-
33097/LF320	AREAS A2/H & CULVERT 3 REFUSE UNDERCUT PLAN	-	-	-
33097/LF321	AREAS A2/H & CULVERT 3 FINISHED LEVELS PLAN	-	-	-
33097/LF330	AREAS A2/H & CULVERT 3 CROSS SECTION PLAN 1	-	-	-
33097/LF340	AREAS A2/H & CULVERT 3 UNDERCUT STRIP PLAN	-	-	-
33097/LF341	AREAS A2/H & CULVERT 3 FINAL LEVELS CUT AND FILL PLAN	-	-	-
33097/LF360	AREAS A2/H & CULVERT 3 CULVERT LONG SECTION PLAN	-	-	A
33097/LF390	AREAS A2/H & CULVERT 3 EROSION AND SEDIMENT CONTROL PLAN	-	-	A
33097/LF500	PROPOSED LANDFILL CELL TYPICAL DETAIL	-	-	-
33097/LF540	DECANTING EARTH BUND DIMENSIONS PLAN	-	-	-
33097/LF545	DECANTING EARTH BUND DETAILS	-	-	-
33097/LF550	EROSION AND SEDIMENT CONTROL DETAILS PAGE 1	-	-	-
33097/LF551	EROSION AND SEDIMENT CONTROL DETAILS PAGE 2	-	-	-

JDC



[illegible]

<b>PROJECT DATUMS:</b>	
LEVEL:	Auckland Vertical Datum 1948
COORDINATE:	New Zealand Transverse Mercator

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE

EXISTING LANDFILL OVERVIEW  
PLAN



# Fraser Thomas

ENGINEERS • RESOURCE MANAGERS • SURVEYORS

<p><b>AUCKLAND</b></p> <p><b>HAWKE'S BAY</b></p> <p><b>CHRISTCHURCH</b></p> <p><b>BLenheim</b></p> <p><b>Nelson</b></p> <p><b>Tauranga</b></p>	<p>09 278 7078</p> <p>06 211 2766</p> <p>03 358 5936</p> <p>03 428 3292</p> <p>03 222 1132</p> <p>07 220 9277</p>
--	---

[www.fraserthomas.co.nz](http://www.fraserthomas.co.nz)

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS

**FOR RESOURCE CONSENT**

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE	1:2500	(A)
DRAWING No.	33097/LE001	REVISION





NOTES

CLIENT

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE

INTRUSIVE GROUND  
INVESTIGATION TEST PIT  
LOCATION PLAN 1 OF 3

**Fraser  
Thomas**

ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND  
 HAWKE'S BAY  
 CHRISTCHURCH  
 BLENHEIM  
 NELSON  
 TAURANGA

09 278 7078  
 06 211 2766  
 03 358 5936  
 03 428 3292  
 03 222 1132  
 07 220 9277

[www.fraserthomas.co.nz](http://www.fraserthomas.co.nz)

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS

**FOR RESOURCE CONSENT**

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE 1:1000	(A)
DRAWING No 33097/LF002	REVISION -

NOT FOR CONSTRUCTION









NOTES

PROJECT DATUMS:  
LEVEL: Auckland Vertical Datum 1947  
COORDINATE: New Zealand Transverse Mercator

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE

INTRUSIVE GROUND  
INVESTIGATION TEST PIT  
LOCATION PLAN 3 OF 3



**Fraser  
Thomas**

ENGINEERS • RESOURCE MANAGERS • SURVEYORS

09 278 7078  
06 211 2766  
03 258 5936  
03 408 3292  
03 222 1132  
07 220 9277

www.fraserthomas.co.nz

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS

**FOR RESOURCE CONSENT**

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

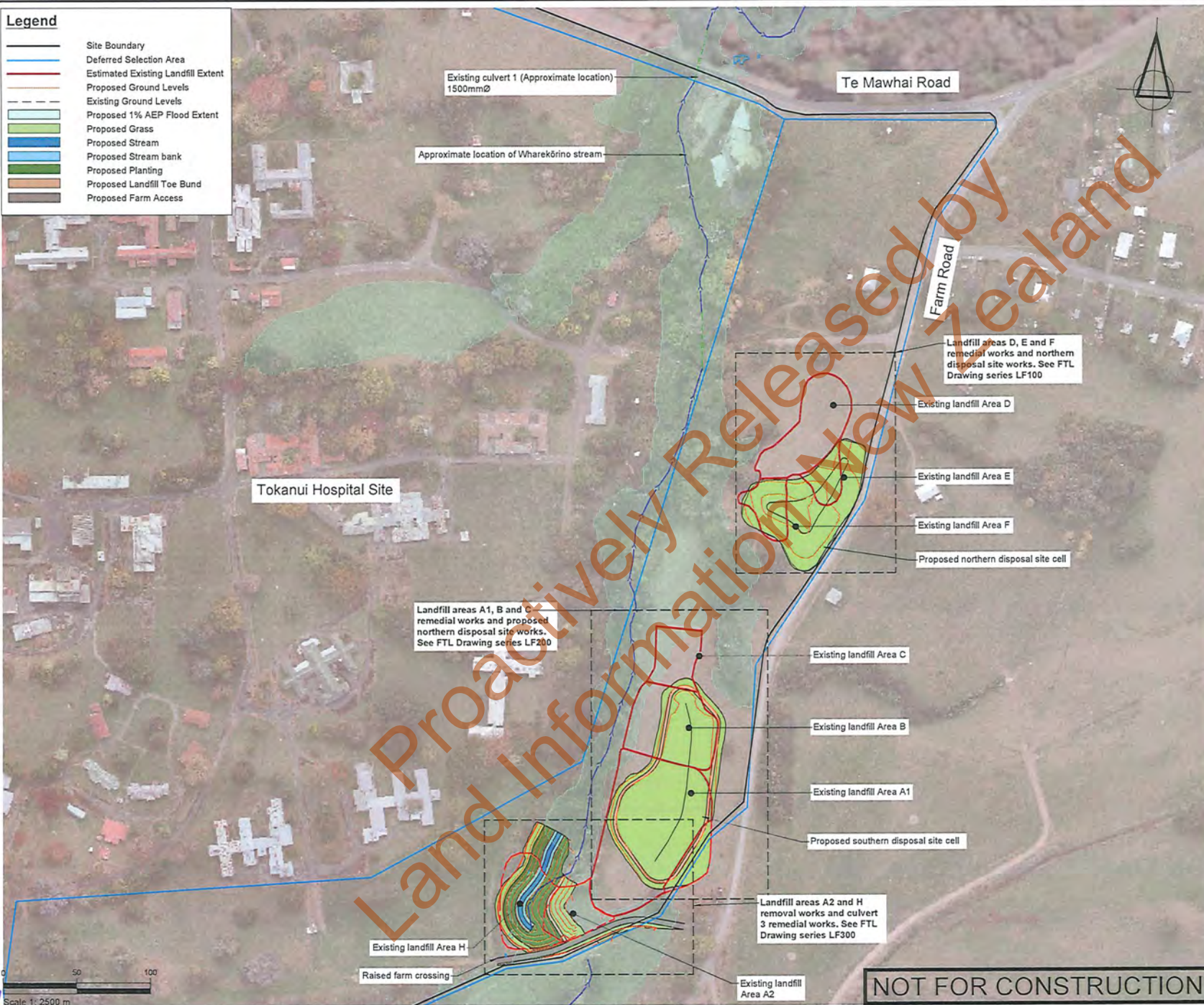
SCALE	1:500	(A)
DRAWING No.	33097/LF004	REVISION
		-

NOT FOR CONSTRUCTION



## Legend

- Site Boundary
- Deferred Selection Area
- Estimated Existing Landfill Extent
- Proposed Ground Levels
- Existing Ground Levels
- Proposed 1% AEP Flood Extent
- Proposed Grass
- Proposed Stream
- Proposed Stream bank
- Proposed Planting
- Proposed Landfill Toe Bund
- Proposed Farm Access



SURVEYED	DATE	APPROVED	DATE
TB	14/09/24	SF	05/11/24
DRAWN	DATE	CHECKED	DATE
TB	15/09/24	SF	05/11/24
REVISION	CHANGES	DATE	
A	STH LF TOE BUND ADDED	SF	20/11/24

NOTES

**PROJECT DATUMS:**  
 LEVEL: Auckland Vertical Datum 1946  
 COORDINATE: New Zealand Transverse Mercator

**CLIENT**  
 TOITU TE WHENUA LAND  
 INFORMATION NEW ZEALAND

**PROJECT**  
 FORMER TOKANUI HOSPITAL  
 DEMOLITION AND REMEDIATION  
 PROJECT

**TITLE**  
 PROPOSED LANDFILL REMEDIAL  
 WORKS SITE OVERVIEW PLAN

**Fraser Thomas**  
 ENGINEERS - RESOURCE MANAGERS - SURVEYORS  
 AUCKLAND 09 278 7078  
 HAWKE'S BAY 06 211 2766  
 CHRISTCHURCH 03 358 5936  
 DUNEDIN 03 428 3292  
 NELSON 03 222 1132  
 TAURANGA 07 220 9277  
 www.fraserthomas.co.nz  
 The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

**STATUS**  
 FOR RESOURCE CONSENT  
 Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE 1:2500 (A3)  
 DRAWING NO. 33097/LF010  
 REVISION A

NOT FOR CONSTRUCTION













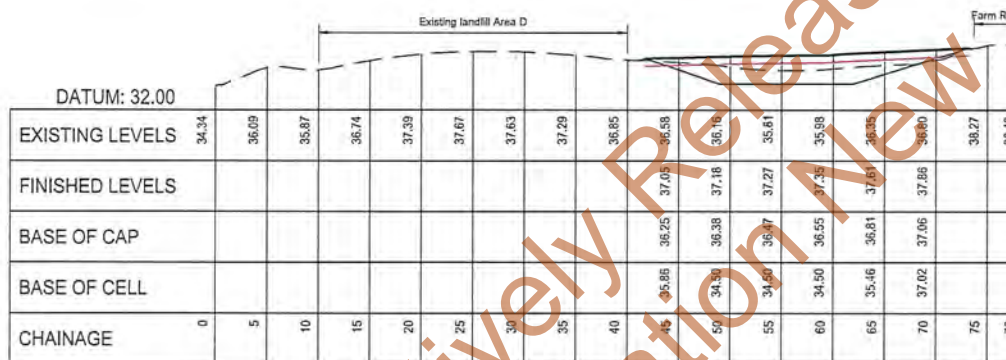








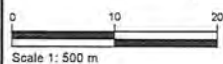
1-1 Cross Section 1-1  
121 1:500



1-2 Cross Section 1-2  
121 1:500



1-3 Cross Section 1-3  
121 1:500



NOT FOR CONSTRUCTION

[illegible]

NOTE:



<b>PROJECT DATUMS:</b>	
LEVEL:	Auckland Vertical Datum 194
COORDINATE:	New Zealand Transverse Mercate

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE

PROPOSED NORTHERN  
DISPOSAL SITE CELL  
CROSS SECTIONS



The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

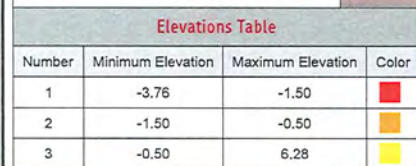
STATUS

**FOR RESOURCE CONSENT**

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings unless otherwise indicated.

SCALE	1:500	(A)
DRAWING No.	33097/LF130	REVISION





**Landfill Area D**—  
Landfill area to be stripped of topsoil.  
Excavate capping material to 200mm thick  
above refuse. Install landfill capping layer,  
and topsoil with grass seed.

Existing landfill Area D

Farm Road

Existing landfill Area E

Existing landfill Area F

### Estimated Earthworks Volumes

Northern Disposal Area:

Area =  $4000\text{m}^2$

1. Strip volumes:
  - 1.1. Topsoil =  $400\text{m}^3$  (assumed 150mm topsoil)
  - 1.2. Capping material area  $E = 132\text{m}^2$
  - 1.3. Capping material area  $F = 280\text{m}^2$
  - 1.4. Landfill material area  $E = 330\text{m}^2$  (assumed 0.5 average depth over area)
  - 1.5. Landfill material area  $F = 466\text{m}^2$  (assumed 0.5 average depth over area)

2. Total cut to fill of subgrade
  - 2.1. Cut = 5900m<sup>3</sup>
  - 2.2. Fill = 0m<sup>3</sup>
  - 2.3. Balance = 5900m<sup>3</sup> cut

Existing Landfill Area D

Area =  $2400\text{m}^2$

1. Strip volumes:
  - 1.1. Topsoil =  $350\text{m}^3$  (assumed 140mm topsoil)
  - 1.2. Capping material area D =  $50\text{m}^2$  (minimal existing capping)
2. Capping volume:
  - 2.1. Clay or other suitable material =  $1650\text{m}^3$
  - 2.2. Topsoil =  $400\text{m}^3$

[illegible]

NOTES

**PROJECT DATUMS:**  
LEVEL: Auckland Vertical Datum 1949  
COORDINATE: New Zealand Transverse Mercator

**CLIENT**

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

**PROJECT**

FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

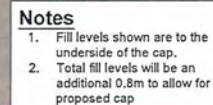
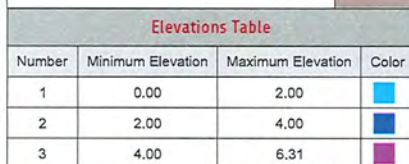
TITLE

PROPOSED NORTHERN  
DISPOSAL SITE CELL  
CELL FORMATION CUT AND FILL  
PLAN

STATUS	
<b>FOR RESOURCE CONSENT</b> Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings unless otherwise indicated.	
SCALE	1:500 (A)
DRAWING No	REVISION
33097/LF140	-

NOT FOR CONSTRUCTION





1. Total fill to be placed =  $7900\text{m}^3$  (max)
2. Total cap to be placed (650mm) =  $2500\text{m}^3$
3. Total topsoil to be placed (150mm) =  $600\text{m}^3$

[illegible]

NOTES

<b>PROJECT DATUMS:</b>	
LEVEL:	Auckland Vertical Datum 1946
COORDINATE:	New Zealand Transverse Mercator

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

PROPOSED NORTHERN  
DISPOSAL SITE CELL  
FILLING PLAN



ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND	09 278 7078
HAWKE'S BAY	06 211 2766
CHRISTCHURCH	03 358 5936
BLENHEIM	03 428 3292
NELSON	03 222 1132
TAURANGA	07 220 9277

www.fraserthomas.co.nz

STATUS FOR RESOURCE CONSENT

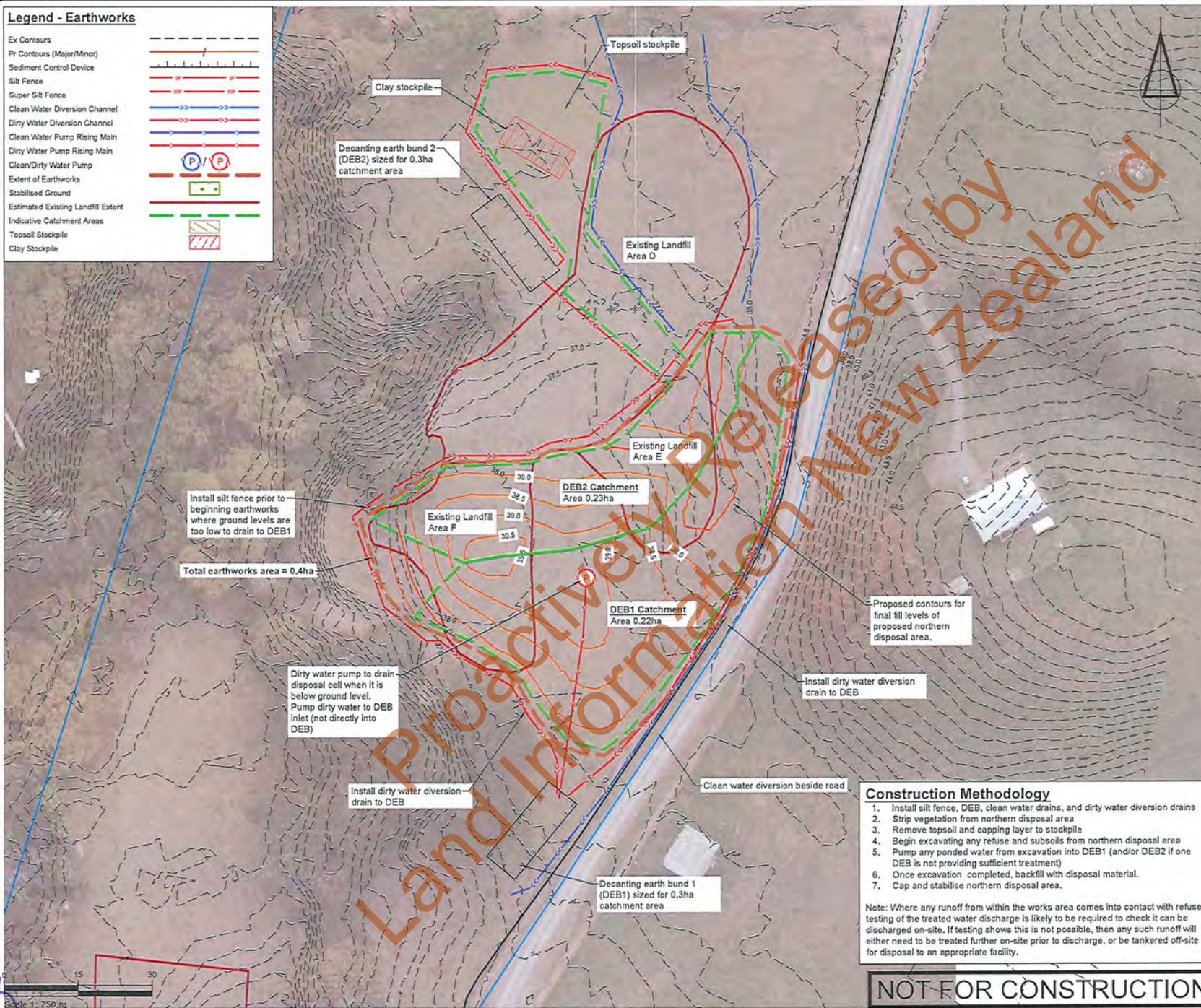
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE 1:500 (A)

DRAWING No.	REVISION
33097/LF141	-



Ex Contours  
Pr Contours (Major/Minor)  
Sediment Control Device  
Silt Fence  
Super Silt Fence  
Clean Water Diversion Channel  
Dirty Water Diversion Channel  
Clean Water Pump Rising Main  
Dirty Water Pump Rising Main  
Clean/Dirty Water Pump  
Extent of Earthworks  
Stabilised Ground  
Estimated Existing Landfill Extent  
Indicative Catchment Areas  
Topsoil Stockpile  
Clay Stockpile

[illegible]

NOTES

<b>PROJECT DATUMS:</b>	
LEVEL:	Auckland Vertical Datum 1946
COORDINATE:	New Zealand Transverse Mercator

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE

PROPOSED NORTHERN  
DISPOSAL SITE CELL  
EROSION AND SEDIMENT  
CONTROL PLAN PHASE 1



ENGINEERS = RESOURCE MANAGERS = SURVEYORS

AUCKLAND	09 278 7078
HAWKE'S BAY	06 211 2766
CHRISTCHURCH	03 358 5936
BLenheim	03 428 3292
NELSON	03 222 1132
TAURANGA	07 220 9277

[www.fraserthomas.co.nz](http://www.fraserthomas.co.nz)

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS  
**FOR RESOURCE CONSENT**  
 Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

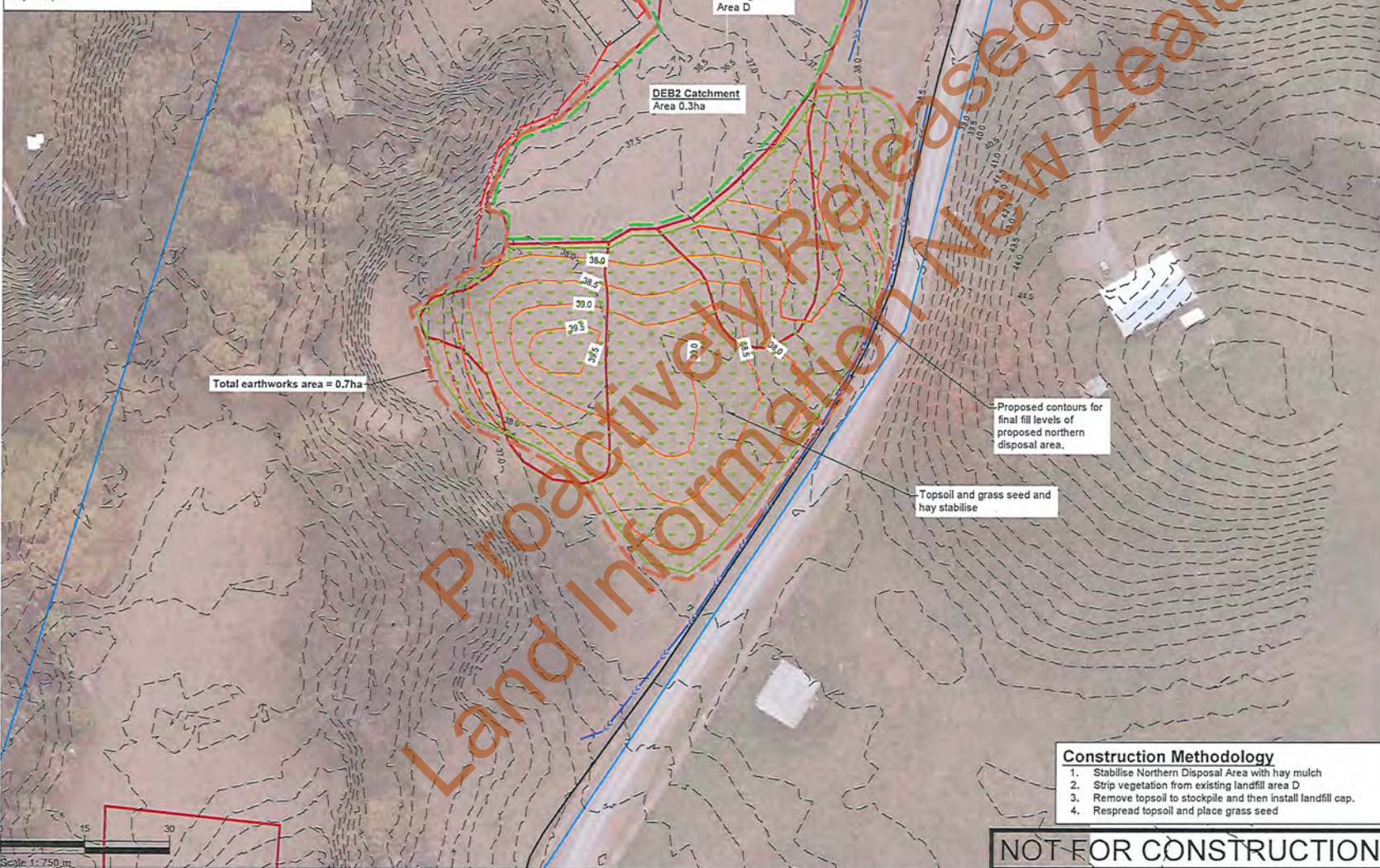
SCALE	1:750	(A3)
DRAWING No	33097/LF190	REVISION
		-

~~NOT FOR CONSTRUCTION~~



# Legend - Earthworks

Ex Contours	
Pr Contours (Major/Minor)	
Sediment Control Device	
Silt Fence	
Super Silt Fence	
Clean Water Diversion Channel	
Dirty Water Diversion Channel	
Clean Water Pump Rising Main	
Dirty Water Pump Rising Main	
Clean/Dirty Water Pump	
Extent of Earthworks	
Stabilised Ground	
Estimated Existing Landfill Extent	
Indicative Catchment Areas	
Topsoil Stockpile	
Clay Stockpile	



SURVEYED	TB	14/08/24	APPROVED	SF	DATE
DRAWN	TB	15/08/24			05/11/24
CHECKED	SF	05/11/24			
REVISION		CHANGES		CHECKED	DATE

## NOTES

**PROJECT DATUMS:** Auckland Vertical Datum 1946  
**LEVEL:** Auckland Vertical Datum 1946  
**COORDINATE:** New Zealand Transverse Mercator

**CLIENT**  
 TOITU TE WHENUA LAND  
 INFORMATION NEW ZEALAND

**PROJECT**  
 FORMER TOKANUI HOSPITAL  
 DEMOLITION AND REMEDIATION  
 PROJECT

**TITLE**  
 PROPOSED NORTHERN  
 DISPOSAL SITE CELL  
 EROSION AND SEDIMENT  
 CONTROL PLAN PHASE 2

**Fraser Thomas**  
 ENGINEERS - RESOURCE MANAGERS - SURVEYORS

AUCKLAND 09 278 7078  
 HAWKE'S BAY 06 211 2766  
 CHRISTCHURCH 03 358 5936  
 BLLENHEIM 03 428 3292  
 NELSON 03 222 1132  
 TAURANGA 07 220 9277

www.fraserthomas.co.nz

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

## Construction Methodology

1. Stabilise Northern Disposal Area with hay mulch
2. Strip vegetation from existing landfill area D
3. Remove topsoil to stockpile and then install landfill cap.
4. Respread topsoil and place grass seed

NOT FOR CONSTRUCTION

## FOR RESOURCE CONSENT

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE	1:750	(A3)
DRAWING NO.	33097/LF191	REVISION

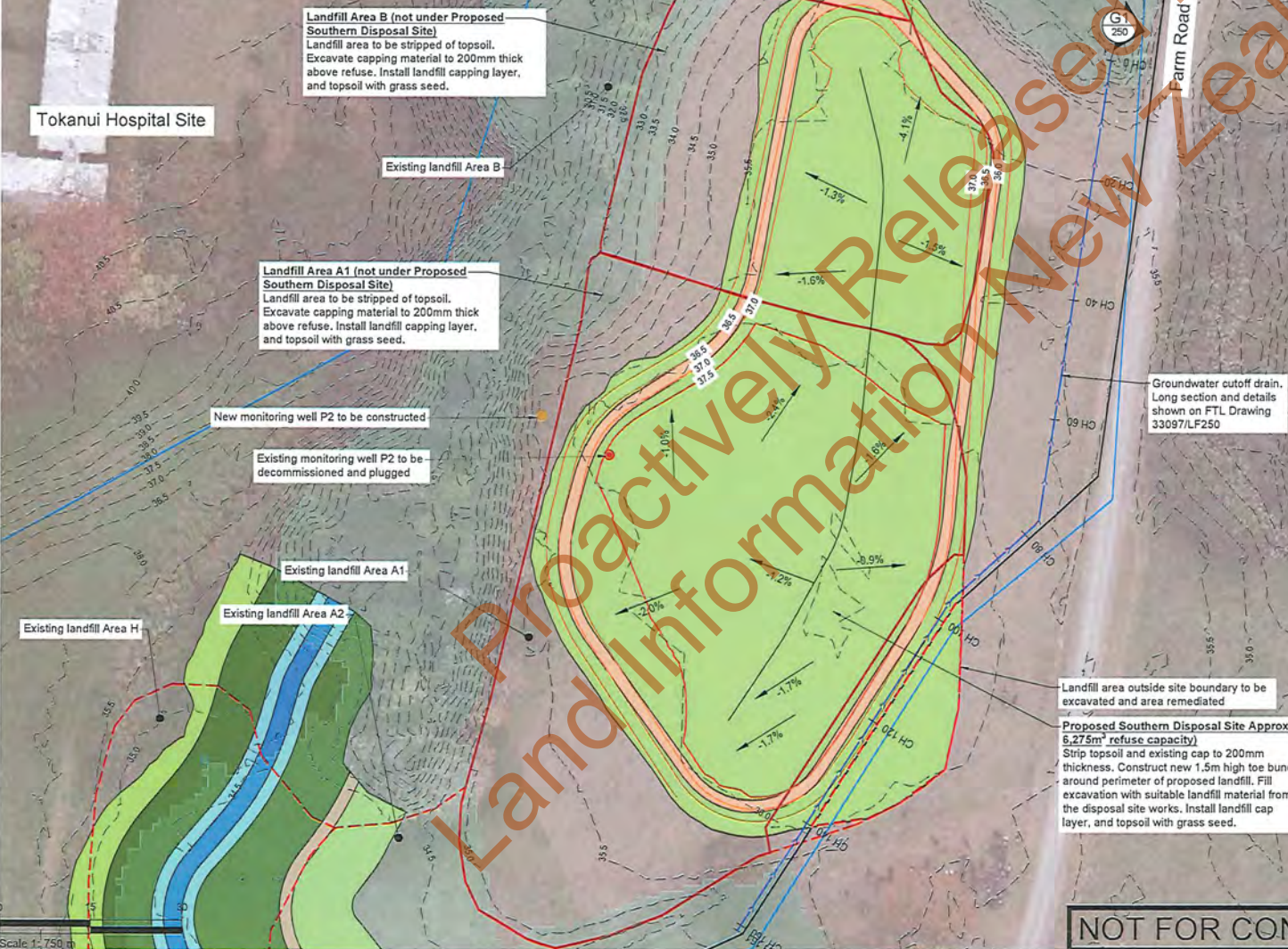






# Legend

- Site Boundary
- Deferred Selection Area
- Estimated Existing Landfill Extent
- Proposed Ground Levels
- Existing Ground Levels
- Proposed 1% AEP Flood Extent
- Proposed Grass
- Proposed Stream
- Proposed Stream bank
- Proposed Planting
- Proposed Landfill Toe Bund
- Proposed Farm Access



NOT FOR CONSTRUCTION

SURVEYED	DESIGNED	CHECKED	APPROVED	DATE
TB	TB	SF	SF	05/11/24
14/08/24	15/08/24	05/11/24		
REVISION	CHANGES	CHECKED	DATE	
A	5TH LF TOE BUND ADDED	SF	20/11/24	

NOTES

**PROJECT DATUMS:**  
LEVEL: Auckland Vertical Datum 1946  
COORDINATE: New Zealand Transverse Mercator

**CLIENT**  
TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

**PROJECT**  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

**TITLE**  
PROPOSED SOUTHERN  
DISPOSAL SITE CELL  
PROPOSED FINAL DESIGN PLAN

**Fraser Thomas**  
ENGINEERS • RESOURCE MANAGERS • SURVEYORS  
AUCKLAND 09 278 7078  
HAWKE'S BAY 06 211 2766  
CHRISTCHURCH 03 358 5936  
BLenheim 03 428 3292  
NELSON 03 222 1132  
TAURANGA 07 220 9277  
www.fraserthomas.co.nz

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

**STATUS**  
FOR RESOURCE CONSENT  
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

**SCALE** 1:750 (A2)  
**DRAWING NO.** 33097/LF210  
**REVISION** A



# Legend

- Site Boundary
- Deferred Selection Area
- Estimated Existing Landfill Extent
- Existing Ground Levels
- Proposed Ground Levels
- Proposed clay material
- Landfill material
- Natural ground

1m width of natural ground—  
used as buffer between refuse  
and proposed toe bund

Refuse cut face at 1:2 (to be  
confirmed by investigation at  
detailed design phase) from  
existing ground level down to  
natural ground level

Toe bund formed with  
compacted clay or  
other suitable material  
at 1:1.5 batter slope,  
grading from existing  
ground level down to  
natural ground level  
once refuse has been  
removed

Backfill excavated area over site  
boundary with clean subsoil  
material and 150mm topsoil

Top of toe bund batter line

NOT FOR CONSTRUCTION

SURVEYED	DATE	APPROVED	DATE
DESIGNED	TB	20/11/24	SF
DRAWN	TB	20/11/24	21/11/24
CHECKED	SF	21/11/24	
REVISION	CHANGES	CHECKED	DATE

## NOTES

**PROJECT DATUMS:**  
LEVEL: Auckland Vertical Datum 1946  
COORDINATE: New Zealand Transverse Mercator

**CLIENT**  
TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

**PROJECT**  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

**TITLE**  
PROPOSED SOUTHERN  
DISPOSAL SITE CELL  
PROPOSED TOE BUND PLAN

**Fraser Thomas**  
ENGINEERS + RESOURCE MANAGERS + SURVEYORS

AUCKLAND 09 278 7078  
HAWKE'S BAY 06 211 2766  
CHRISTCHURCH 03 358 5936  
BLENHEIM 03 428 3292  
NELSON 03 222 1132  
TAURANGA 07 220 9277

www.fraserthomas.co.nz

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

**STATUS**  
FOR RESOURCE CONSENT  
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

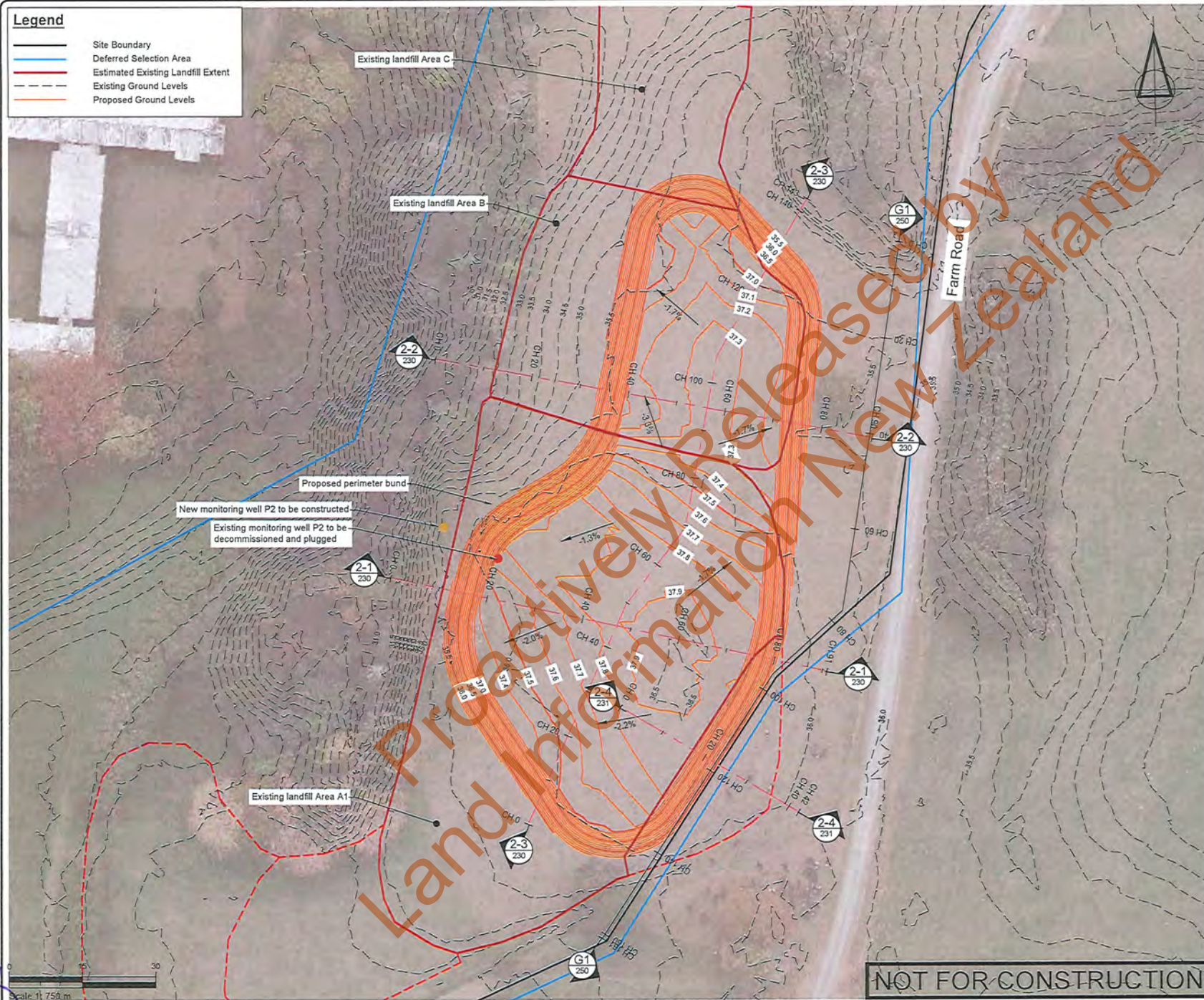
SCALE	1:250	(A3)
DRAWING No.	33097/LF219	REVISION









[illegible]

NOTES

**PROJECT DATUMS:**  
LEVEL: Auckland Vertical Datum 1946  
COORDINATE: New Zealand Transverse Mercator

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

PROPOSED SOUTHERN  
DISPOSAL SITE CELL  
FINISHED GROUND LEVELS  
PLAN

 **Fraser  
Thomas**  
ENGINEERS = RESOURCE MANAGERS = SURVEYORS

AUCKLAND  
HAWKE'S BAY  
CHRISTCHURCH  
BLENHEIM  
NELSON  
TAURANGA

09 278 7078  
06 211 2766  
03 358 5936  
03 428 3292  
03 222 1132  
07 220 9277

[www.fraserthomas.co.nz](http://www.fraserthomas.co.nz)

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS

**FOR RESOURCE CONSENT**

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings unless otherwise indicated.

SCALE	1:750	(A)
DRAWING No	33097/LF221	REVISION
		A



**Legend**

- Existing Ground
- Finished Ground
- Proposed Cap
- Proposed Cell Base

Existing landfill Area A1

DATUM: 28.00

EXISTING LEVELS	31.06	33.32	35.52	35.74	35.95	35.97	36.13	36.16	36.38	36.40	36.45	36.47	36.48	36.51	36.43	36.33	36.23	36.10	35.83
FINISHED LEVELS				36.43	37.46	37.54	37.81	37.89	37.76	37.84	37.92	37.94	37.97	37.93	37.88	37.67	36.42		
BASE OF CAP				35.63	36.66	36.74	36.81	36.89	36.96	37.04	37.12	37.14	37.17	37.13	37.08	36.87	36.52		
BASE OF CELL				36.43	35.03	35.27	35.43	35.46	35.68	35.70	35.75	35.77	35.76	35.81	35.60	35.46	35.42		
CHAINAGE	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90

2-1 Cross Section 2-1  
221 1:500

Existing landfill Area B

DATUM: 28.00

EXISTING LEVELS	31.41	31.27	32.27	33.01	33.81	34.53	35.06	35.45	35.62	35.76	35.84	35.91	35.92	35.94	35.68	35.52	35.49	35.47	35.45
FINISHED LEVELS								35.91	37.12	37.49	37.26	37.33	37.33	37.25	37.41	36.25			
BASE OF CAP								35.11	35.32	36.39	36.46	36.53	36.53	36.45	36.37	35.45			
BASE OF CELL								35.91	35.46	35.06	35.14	35.21	35.22	35.03	34.75	36.25			
CHAINAGE	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	88

2-2 Cross Section 2-2  
221 1:500

DATUM: 30.00																														
EXISTING LEVELS	35.78																													
FINISHED LEVELS																														
BASE OF CAP																														
BASE OF CELL																														
CHAINAGE	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	143

Scale 1: 500 m

2-3 Cross Section 2-3  
221 1:500

NOT FOR CONSTRUCTION

SURVEYED	TD	14/09/24	APPROVED	SF	DATE
DRAWN	TD	21/09/24	CHECKED	SF	05/11/24
DATE	15/11/24				
REVISION	CHANGES	CHECKED	DATE		
A	STH LF TOE BUND ADDED	SP	20/11/24		

PROJECT DATUMS:	Auckland Vertical Datum 1946
LEVEL	New Zealand Transverse Mercator
COORDINATE:	

CLIENT  
TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE  
PROPOSED SOUTHERN  
DISPOSAL SITE CELL  
CROSS SECTIONS SHEET 1

**Fraser Thomas**  
ENGINEERS + RESOURCE MANAGERS + SURVEYORS

AUCKLAND 09 278 7078  
HAWKE'S BAY 06 211 2766  
CHRISTCHURCH 03 358 5936  
BLENHEIM 03 428 3292  
NELSON 03 222 1132  
TAURANGA 07 220 9277

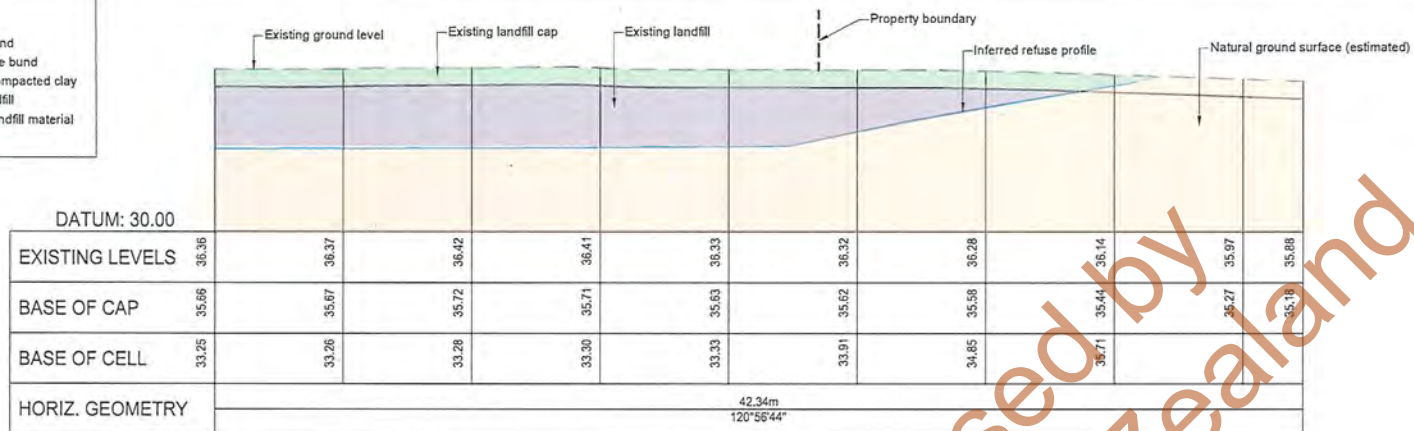
www.fraserthomas.co.nz

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS  
FOR RESOURCE CONSENT  
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE 1:500 (A2)  
DRAWING NO. 33097/LF230  
REVISION A





DATUM: 30.00

CHAINAGE

0 5 10 15 20 25 30 35 40 42

Existing landfill cap

Existing landfill

Excavate existing landfill and cap to stockpile to form stable landfill batter. Batter stability to be confirmed on site by engineer

Proposed toe bund (compacted engineered clay or other suitable material).

New perimeter bund installed at top of toe bund

Groundwater drain to be installed below toe bund prior to construction of bund

Excavate existing topsoil and cap to stockpile, refuse to Area A1

Backfill area behind toe bund with suitable cohesive material and 150mm topsoil

1:2 TBC

1:1.5

1:4

1.00

2.00

Contractively Rejected

Landfill material

Existing landfill cap to be excavated to 200mm thickness prior to placing further material

Backfill excavation with material previously removed or other refuse

2.00

7:4

Property boundary

Groundwater drain to be installed below toe bund prior to construction of bund

DATUM: 30.00

CHAINAGE

0 10 15 20 25 30 35 40

NOT FOR CONSTRUCTION

[illegible]

NOTES

**PROJECT DATUMS:**  
LEVEL: Auckland Vertical Datum 194  
COORDINATE: New Zealand Transverse Mercator

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE

PROPOSED SOUTHERN  
DISPOSAL SITE CELL  
CROSS SECTIONS SHEET 2



ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND	09 278 7078
HAWKE'S BAY	06 211 2766
CHRISTCHURCH	03 358 5936
BLENHEIM	03 428 3292
NELSON	03 222 1132
TAURANGA	07 220 9277

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS

**FOR RESOURCE CONSENT**

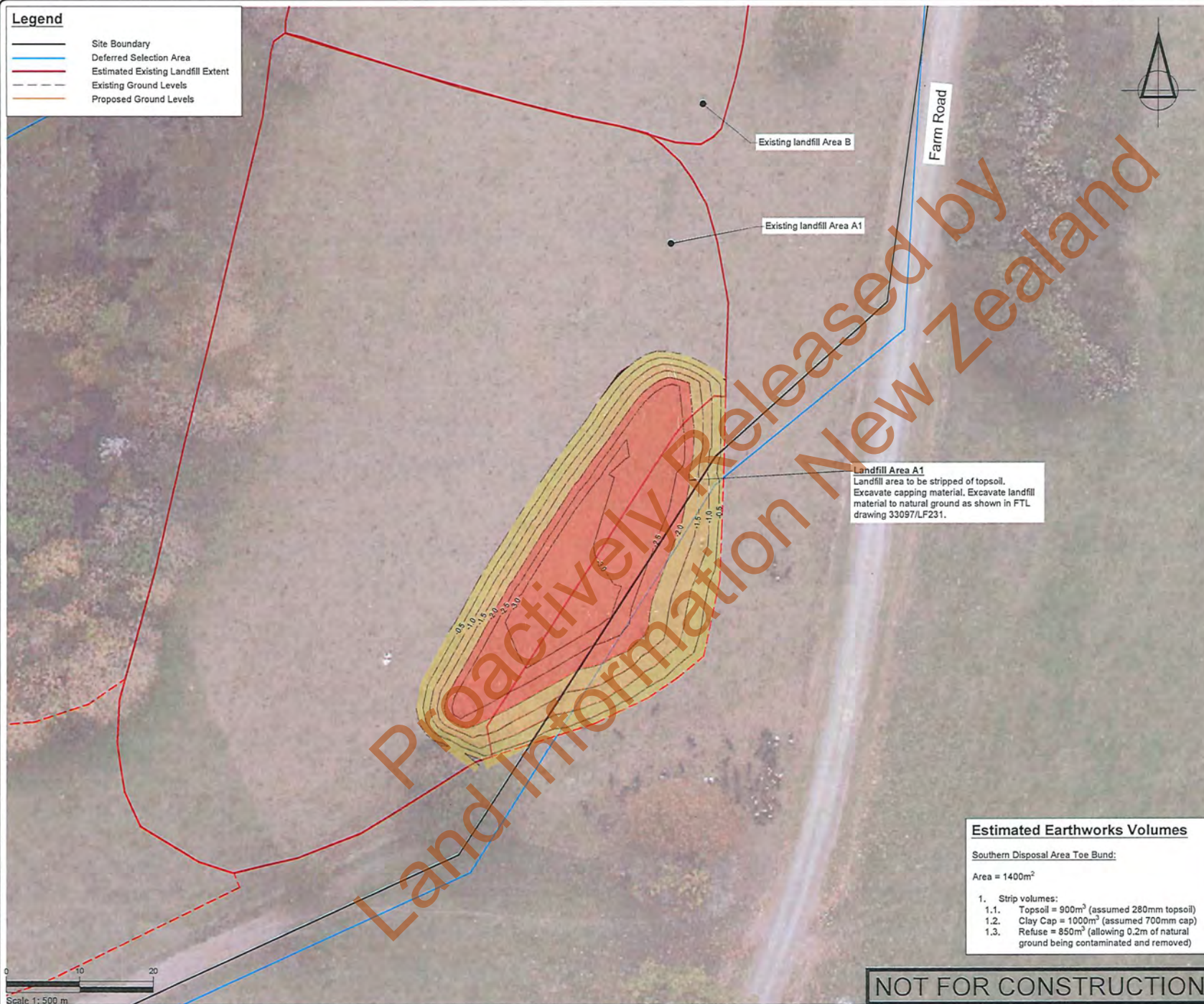
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE 1:200 (A)

DRAWING No.	REVISION
-------------	----------

33097/LF231 -



[illegible]

NOTES

**PROJECT DATUMS:**  
LEVEL: Auckland Vertical Datum 1949  
COORDINATE: New Zealand Transverse Mercator

CLIENT

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE

PROPOSED SOUTHERN  
DISPOSAL SITE CELL  
REFUSE EXCAVATION PLAN



## Fraser Thomas

ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND	09 278 7078
HAWKE'S BAY	06 211 2766
CHRISTCHURCH	03 358 5936
BLenheim	03 428 3292
NELSON	03 222 1132
TAURANGA	07 220 9277

[www.fraserthomas.co.nz](http://www.fraserthomas.co.nz)


The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS

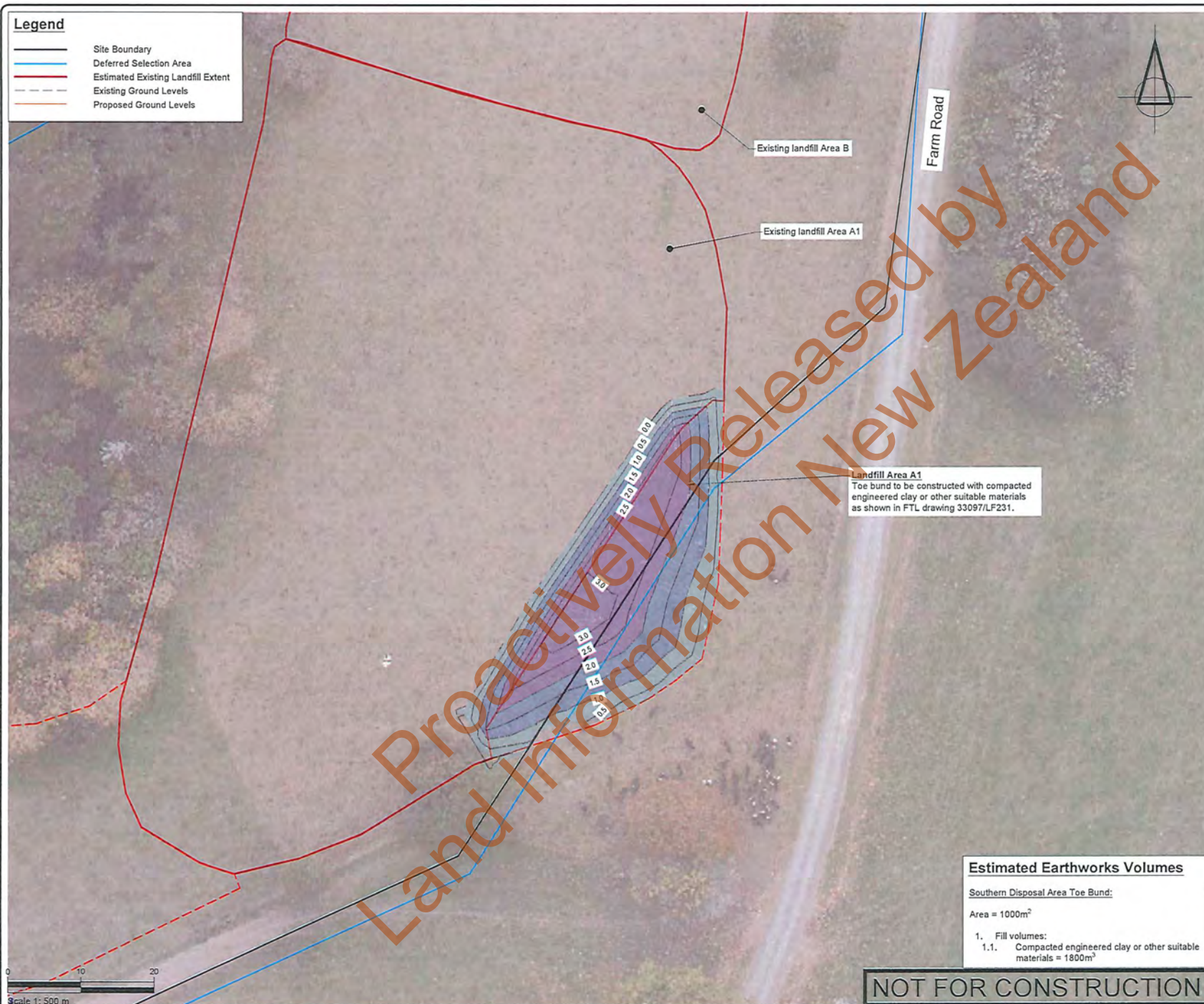
**FOR RESOURCE CONSENT**

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings unless otherwise indicated.

SCALE	1:500	(A)
DRAWING No	33097/LF238	REVISION
		-





[illegible]

**NOTES**

<b>PROJECT DATUMS:</b>	
LEVEL:	Auckland Vertical Datum 194
COORDINATE:	New Zealand Transverse Mercator

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE

PROPOSED SOUTHERN  
DISPOSAL SITE CELL  
TOE BUND CONSTRUCTION  
PLAN



## Fraser Thomas

ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND  
HAWKE'S BAY  
CHRISTCHURCH  
BLENHEIM  
NELSON  
TAURANGA

09 278 7078  
06 211 2766  
03 358 5936  
03 428 3292  
03 222 1132  
07 220 9277

[www.fraserthomas.co.nz](http://www.fraserthomas.co.nz)

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS	
FOR RESOURCE CONSEN	
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings unless otherwise indicated.	
SCALE	1:500 (A)
DRAWING No	33097/LF239
REVISION	-















# Legend

- Site Boundary
- Deferred Selection Area
- Estimated Existing Landfill Extent
- Existing Ground Levels
- Proposed Ground Levels
- Earthworks Extent
- Extent of Vegetation Removal

Provisional vegetation clearance area, if channel needs extending to tie in with existing channel - to be confirmed on-site.

Proposed contours for final cut and fill levels shown.

Total earthworks area = 0.47ha

Existing Landfill Area H

Existing Landfill Area A2

Existing culvert (to be fully grouted and plugged)

Existing Landfill Area A1

Proposed culvert

## Notes

- Existing vegetation removal required around existing culvert 3 inlet/outlet are provisional and will depend on the contractor's methodology for getting access to these areas to seal the existing culvert, particularly how they will isolate the works area from the normal stream flows. Any riparian vegetation that has to be removed to facilitate this or is accidentally damaged during the works will be reinstated on works completion.
- Provisional vegetation removal area - only required if stream channel is further to the east of the location indicated by Lidar data.

NOT FOR CONSTRUCTION

SURVEYED		APPROVED	DATE
DESIGNED	TB	14/08/24	SF
DRAWN	TB	15/09/24	05/11/24
CHECKED	SF	05/11/24	
REVISION	CHANGES	CHECKED	DATE

## NOTES

**PROJECT DATUMS:**  
LEVEL: Auckland Vertical Datum 1946  
COORDINATE: New Zealand Transverse Mercator

**CLIENT**  
TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

**PROJECT**  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

**TITLE**  
INDICATIVE VEGETATION  
REMOVAL PLAN

**Fraser Thomas**  
ENGINEERS - RESOURCE MANAGERS - SURVEYORS  
AUCKLAND 09 278 7078  
HAWKE'S BAY 06 211 2766  
CHRISTCHURCH 03 358 5936  
BLENHEIM 03 428 3292  
NELSON 03 222 1132  
TAURANGA 07 220 9277  
www.fraserthomas.co.nz

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

**STATUS**  
FOR RESOURCE CONSENT  
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

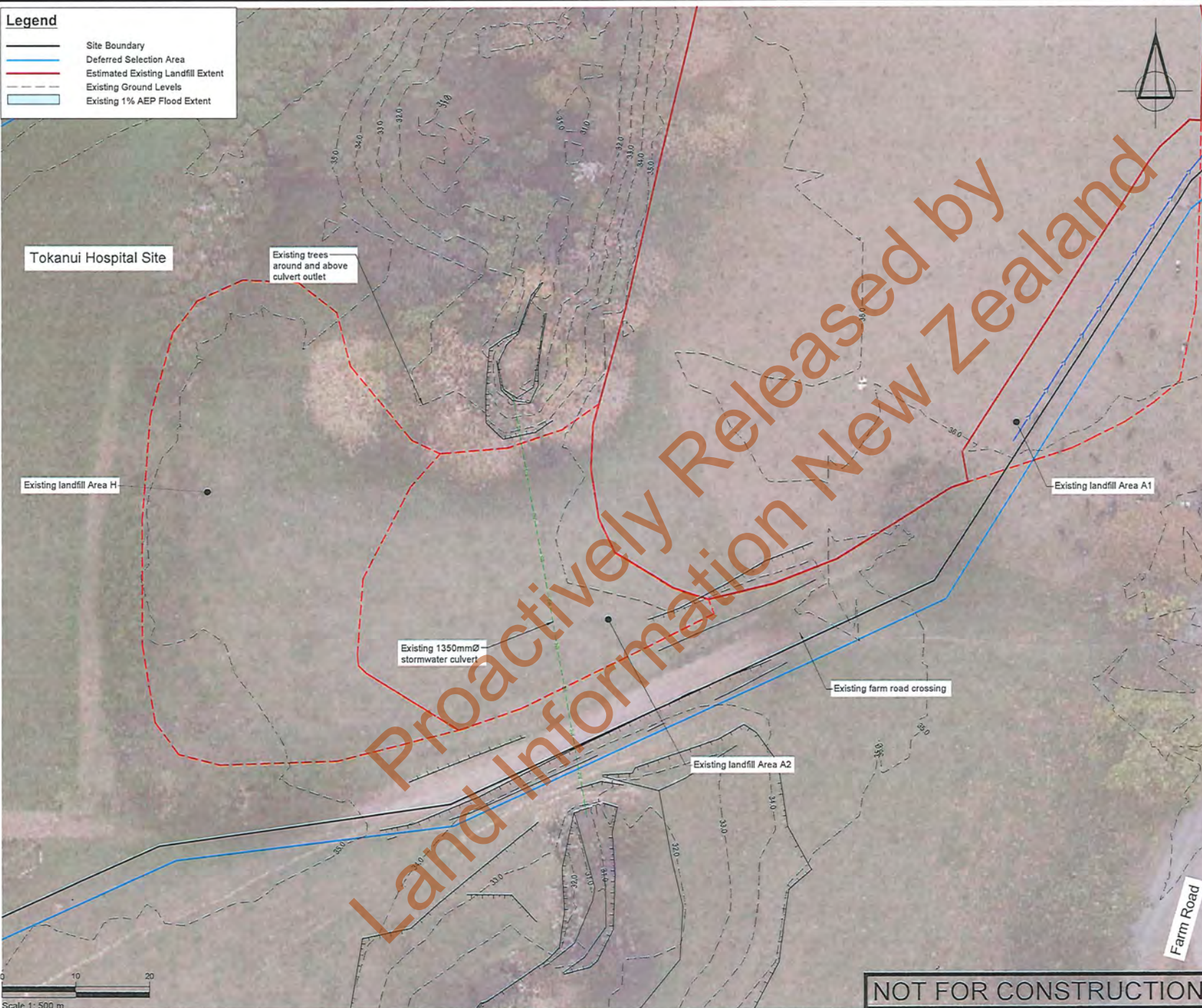
SCALE 1:500 (A3)  
DRAWING No. 33097/LF311  
REVISION -







- Legend**
- Site Boundary
  - Deferred Selection Area
  - Estimated Existing Landfill Extent
  - Existing Ground Levels
  - Existing 1% AEP Flood Extent



SURVEYED	TB	14/09/24	APPROVED	SF	DATE
DRAWN	TB	15/09/24		05/11/24	
CHECKED	SF	05/11/24			
REVISION	CHANGES		CHECKED	DATE	

**NOTES**

**PROJECT DATUMS:** Auckland Vertical Datum 1946  
 LEVEL: Auckland Vertical Datum 1946  
 COORDINATE: New Zealand Transverse Mercator

**CLIENT**

TOITU TE WHENUA LAND  
 INFORMATION NEW ZEALAND

**PROJECT**

FORMER TOKANUI HOSPITAL  
 DEMOLITION AND REMEDIATION  
 PROJECT

**TITLE**

EXISTING LANDFILL AREAS A2  
 AND AREA H, AND EXISTING  
 CULVERT 3 PLAN

**Fraser Thomas**  
 ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND 09 278 7078  
 HAWKE'S BAY 06 211 2766  
 CHRISTCHURCH 03 358 5936  
 BLenheim 03 428 3292  
 Nelson 03 222 1132  
 Tauranga 07 220 9277

www.fraserthomas.co.nz

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

**STATUS**

**FOR RESOURCE CONSENT**

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

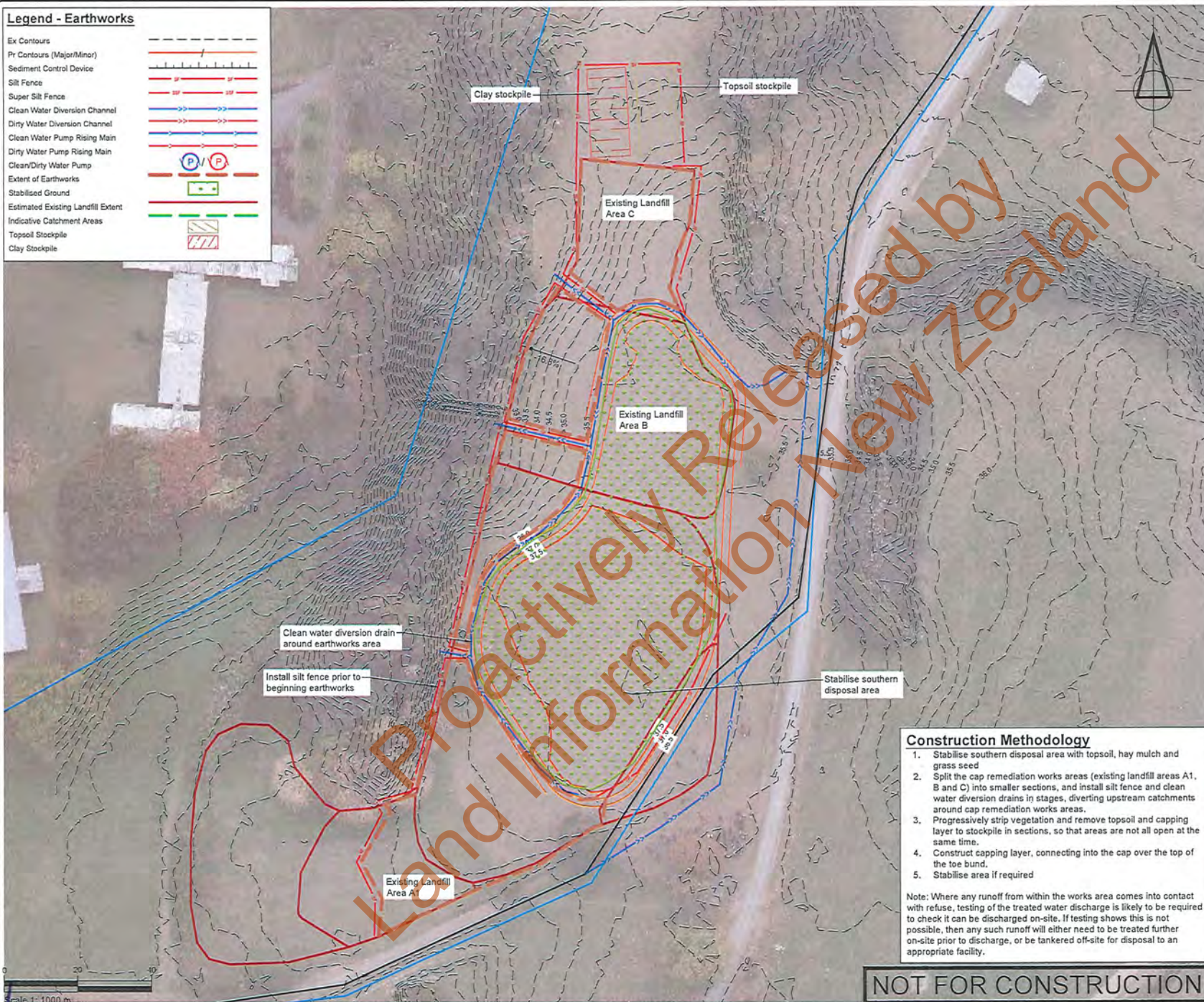
SCALE	1:500	(A2)
DRAWING No	33097/LF300	REVISION
		-

*Handwritten signature*



# Legend - Earthworks

Ex Contours	
Pr Contours (Major/Minor)	
Sediment Control Device	
Silt Fence	
Super Silt Fence	
Clean Water Diversion Channel	
Dirty Water Diversion Channel	
Clean Water Pump Rising Main	
Dirty Water Pump Rising Main	
Clean/Dirty Water Pump	
Extent of Earthworks	
Stabilised Ground	
Estimated Existing Landfill Extent	
Indicative Catchment Areas	
Topsoil Stockpile	
Clay Stockpile	



## Construction Methodology

1. Stabilise southern disposal area with topsoil, hay mulch and grass seed
2. Split the cap remediation works areas (existing landfill areas A1, B and C) into smaller sections, and install silt fence and clean water diversion drains in stages, diverting upstream catchments around cap remediation works areas.
3. Progressively strip vegetation and remove topsoil and capping layer to stockpile in sections, so that areas are not all open at the same time.
4. Construct capping layer, connecting into the cap over the top of the toe bund.
5. Stabilise area if required

Note: Where any runoff from within the works area comes into contact with refuse, testing of the treated water discharge is likely to be required to check it can be discharged on-site. If testing shows this is not possible, then any such runoff will either need to be treated further on-site prior to discharge, or be tankered off-site for disposal to an appropriate facility.

NOT FOR CONSTRUCTION

SURVEYED	TB	14/08/24	APPROVED	SF	DATE
DRAWN	TB	15/09/24			05/11/24
CHECKED	SF	25/11/24			
REVISION	CHANGED		CHECKED		DATE
A	STH LF TOE BUND ADDED		SF		20/11/24

NOTES

**PROJECT DATUMS:**  
LEVEL: Auckland Vertical Datum 1946  
COORDINATE: New Zealand Transverse Mercator

**CLIENT**  
TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

**PROJECT**  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

**TITLE**  
PROPOSED SOUTHERN  
DISPOSAL SITE CELL  
EROSION AND SEDIMENT  
CONTROL PLAN PHASE 2

**Fraser Thomas**  
ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND 09 278 7078  
HAWKE'S BAY 06 211 2766  
CHRISTCHURCH 03 358 5936  
BLENHEIM 03 438 3292  
NELSON 03 222 1132  
TAURANGA 07 220 9277

www.fraserthomas.co.nz  
The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

**STATUS**  
FOR RESOURCE CONSENT  
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

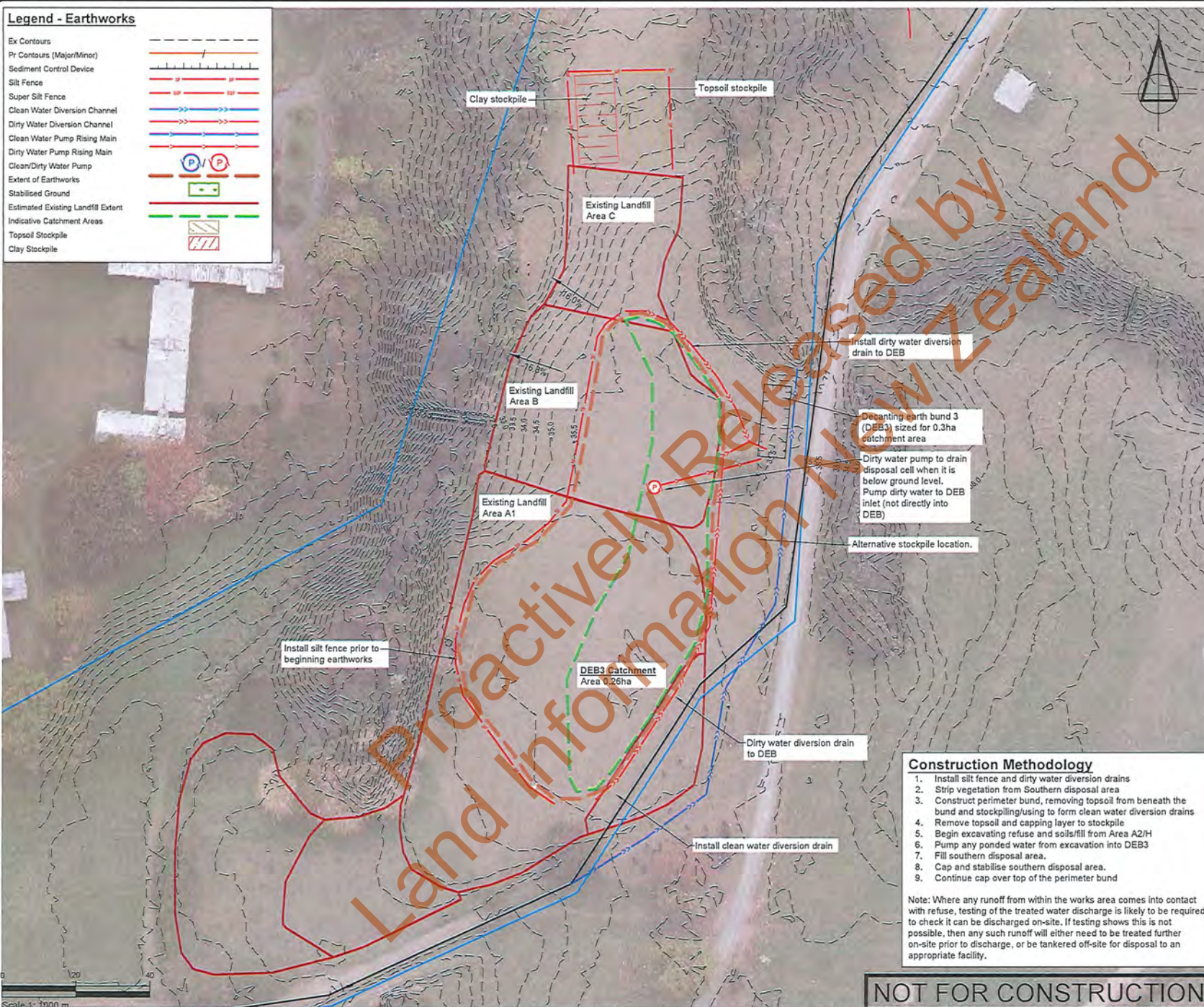
SCALE: 1:1000 (A3)

DRAWING No. 33097/LF291

REVISION A



Ex Contours	
Pr Contours (Major/Minor)	
Sediment Control Device	
Silt Fence	
Super Silt Fence	
Clean Water Diversion Channel	
Dirty Water Diversion Channel	
Clean Water Pump Rising Main	
Dirty Water Pump Rising Main	
Clean/Dirty Water Pump	
Extent of Earthworks	
Stabilised Ground	
Estimated Existing Landfill Extent	
Indicative Catchment Areas	
Topsoil Stockpile	
Clay Stockpile	

[illegible]

## NOTES

**PROJECT DATUMS:**  
 LEVEL: Auckland Vertical Datum 1946  
 COORDINATE: New Zealand Transverse Mercator

CLIENT  
TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE

PROPOSED SOUTHERN  
DISPOSAL SITE CELL  
EROSION AND SEDIMENT  
CONTROL PLAN PHASE 1



Fraser  
Thomas

ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND	09 278 7078
HAWKE'S BAY	06 211 2766
CHRISTCHURCH	03 358 5936
BLENHEIM	03 428 3292
NELSON	03 222 1132
TAURANGA	07 220 9277

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS

**FOR RESOURCE CONSENT**

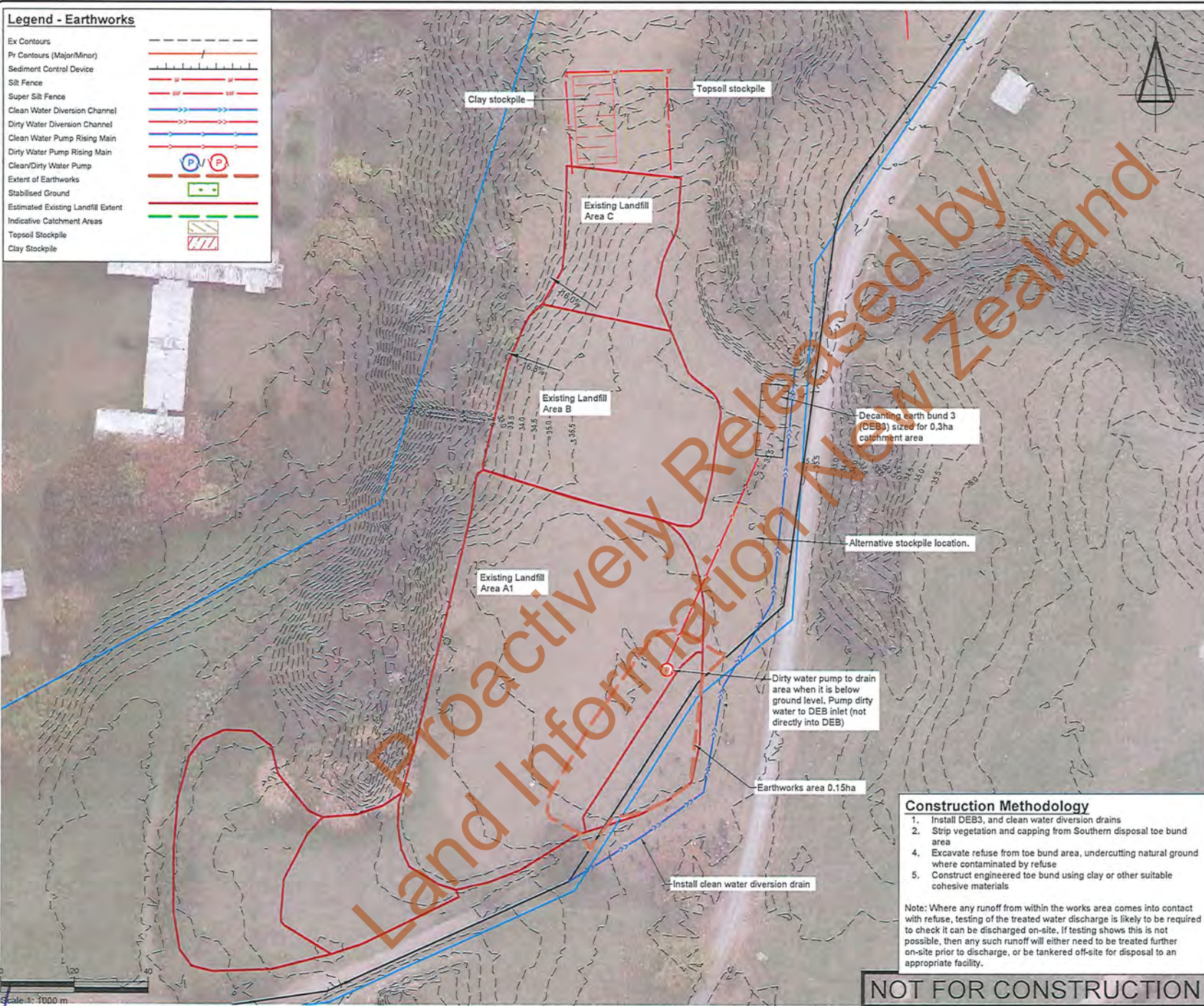
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE	1:1000	(A2)
DRAWING No.	33097/LF290	REVISION
		A

NOT FOR CONSTRUCTION



- Ex Contours
- Pr Contours (Major/Minor)
- Sediment Control Device
- Silt Fence
- Super Silt Fence
- Clean Water Diversion Channel
- Dirty Water Diversion Channel
- Clean Water Pump Rising Main
- Dirty Water Pump Rising Main
- Clean/Dirty Water Pump
- Extent of Earthworks
- Stabilised Ground
- Estimated Existing Landfill Extent
- Indicative Catchment Areas
- Topsoil Stockpile
- Clay Stockpile

[illegible]

NOTES

**PROJECT DATUMS:**  
**LEVEL:** Auckland Vertical Datum 1946  
**COORDINATE:** New Zealand Transverse Mercator

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

PROPOSED SOUTHERN  
DISPOSAL SITE CELL  
EROSION AND SEDIMENT  
CONTROL PLAN PHASE 0



ENGINEERS = RESOURCE MANAGERS = SURVEYORS

AUCKLAND	09 278 7078
HAWKE'S BAY	06 211 2766
CHRISTCHURCH	03 358 5936
BLenheim	03 428 3292
NELSON	03 222 1132
TAURANGA	07 220 9277

[www.fraserthomas.co.nz](http://www.fraserthomas.co.nz)

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS

**FOR RESOURCE CONSENT**

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE	1:1000	(A3)
DRAWING No.	33097/LF289	REVISION
		-

### Construction Methodology

1. Install DEB3, and clean water diversion drains
2. Strip vegetation and capping from Southern disposal toe bund area
4. Excavate refuse from toe bund area, undercutting natural ground where contaminated by refuse
5. Construct engineered toe bund using clay or other suitable cohesive materials

Note: Where any runoff from within the works area comes into contact with refuse, testing of the treated water discharge is likely to be required to check it can be discharged on-site. If testing shows this is not possible, then any such runoff will either need to be treated further on-site prior to discharge, or be tankered off-site for disposal to an appropriate facility.

NOT FOR CONSTRUCTION





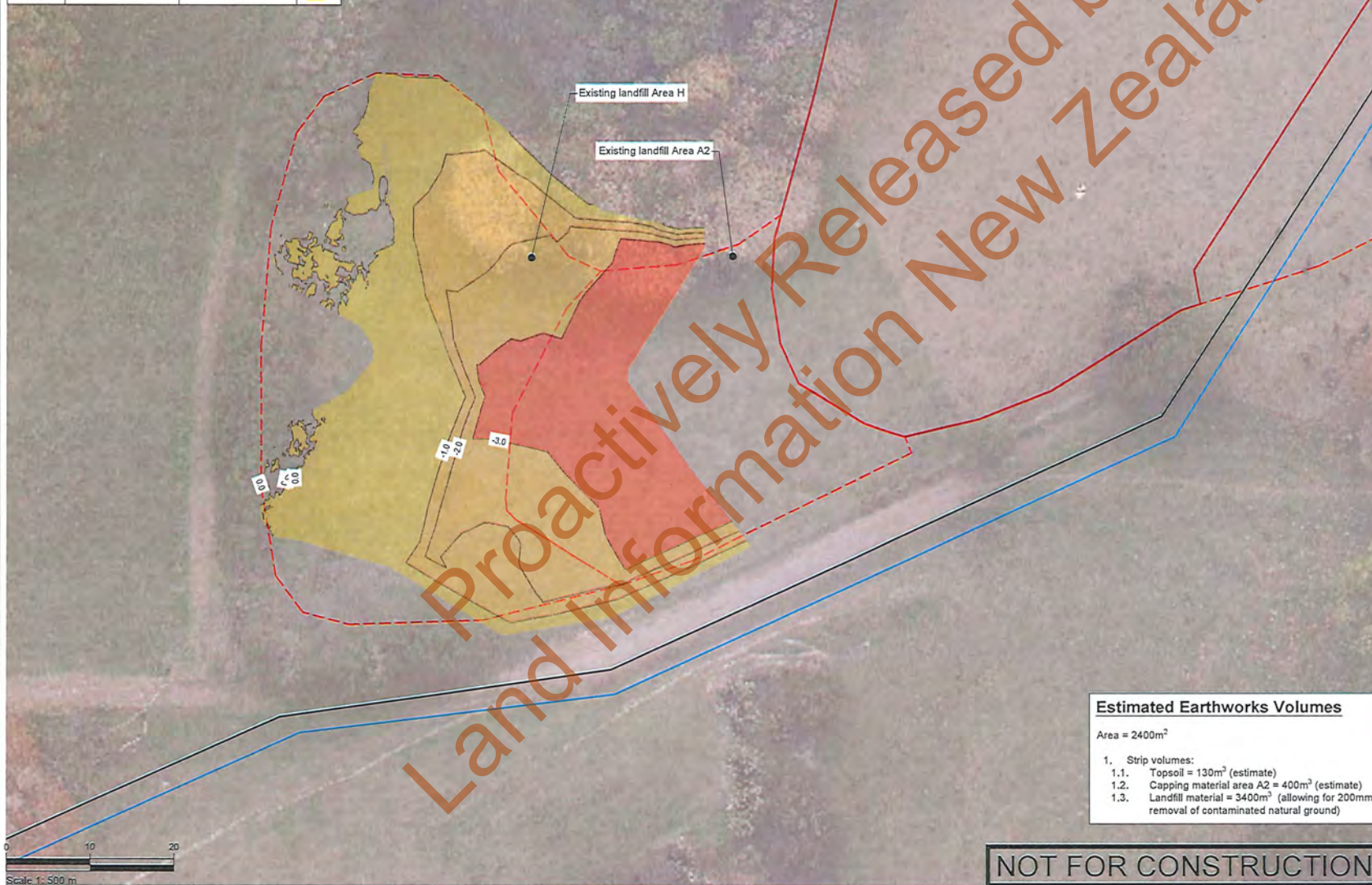
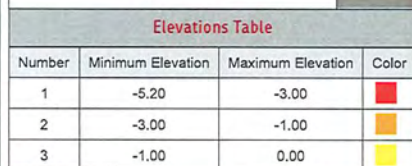










[illegible]

NOTES

**PROJECT DATUMS:**  
LEVEL: Auckland Vertical Datum 1949  
COORDINATE: New Zealand Transverse Mercator

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TITLE

AREAS A2/H & CULVERT 3  
UNDERCUT STRIP PLAN



## Fraser Thomas

ENGINEERS • RESOURCE MANAGERS • SURVEYORS

**AUCKLAND**

**HAWKE'S BAY**

**CHRISTCHURCH**

**BLENNHEIM**

**NELSON**

**TAURANGA**

09 278 7078

06 211 2766

03 358 5936

03 428 3292

03 222 1132

07 220 9277

[www.fraserthomas.co.nz](http://www.fraserthomas.co.nz)

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS

**FOR RESOURCE CONSENT**

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE	1:500	(A)
DRAWING No.	33097/LF340	REVISION
		-

NOT FOR CONSTRUCTION







SURVEYED	DATE	APPROVED	DATE
DRAWN	TB	14/08/24	SF
CHECKED	TB	21/08/24	05/11/24
REVISION	CHANGES	CHECKED	DATE
A	ANNOTATION ADDED	SF	05/11/24

PROJECT DATUMS:	
LEVEL:	Auckland Vertical Datum 1946
COORDINATE:	New Zealand Transverse Mercator

CLIENT	
TOITU TE WHENUA LAND INFORMATION NEW ZEALAND	

PROJECT	
FORMER TOKANUI HOSPITAL DEMOLITION AND REMEDIATION PROJECT	

TITLE	
AREAS A2/H & CULVERT 3 CULVERT LONG SECTION PLAN	



**Fraser Thomas**  
ENGINEERS - RESOURCE MANAGERS - SURVEYORS

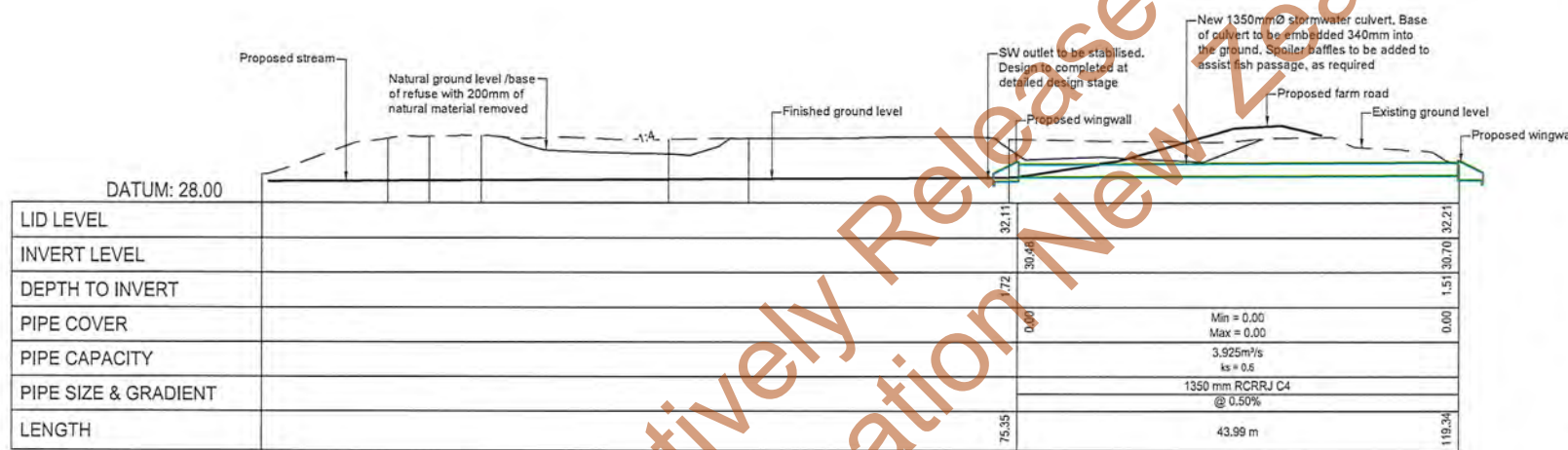
AUCKLAND  
HAWKE'S BAY  
CHRISTCHURCH  
BLenheim  
NELSON  
TAURANGA

09 278 7078  
06 211 2766  
03 358 5936  
03 428 3292  
03 222 1132  
07 220 9277

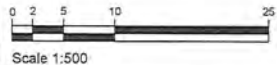
www.fraserthomas.co.nz  
The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS	
FOR RESOURCE CONSENT	

SCALE		(A2)
1:500		
DRAWING NO.		REVISION
33097/LF360		A



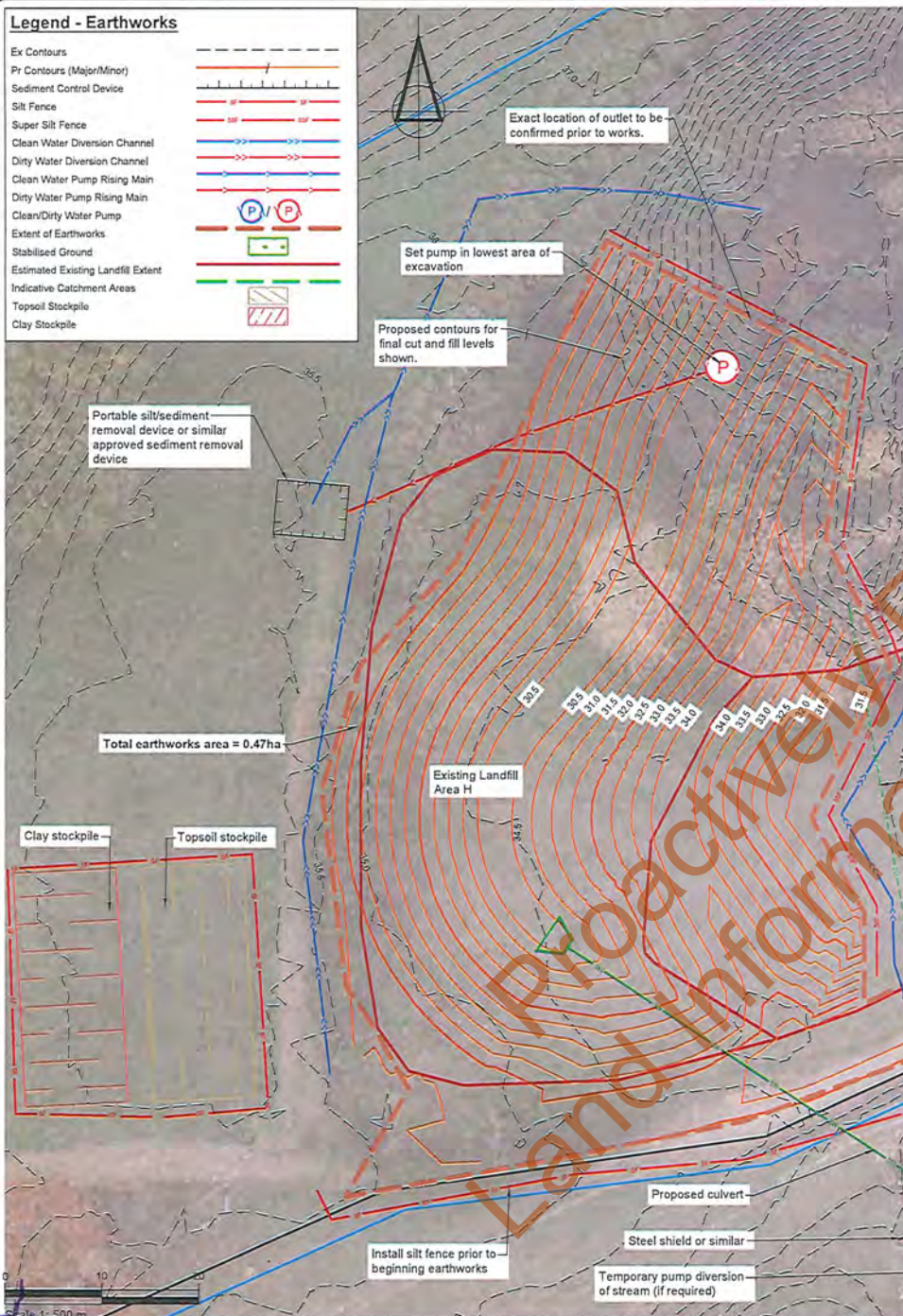
**1 Stormwater Long Section 1**  
 360 1:500



**NOT FOR CONSTRUCTION**



- Ex Contours
- Pr Contours (Major/Minor)
- Sediment Control Device
- Silt Fence
- Super Silt Fence
- Clean Water Diversion Channel
- Dirty Water Diversion Channel
- Clean Water Pump Rising Main
- Dirty Water Pump Rising Main
- Clean/Dirty Water Pump
- Extent of Earthworks
- Stabilised Ground
- Estimated Existing Landfill Extent
- Indicative Catchment Areas
- Topsoil Stockpile
- Clay Stockpile



1. Install silt fences, portable silt/sediment removal device (DEB) of areas of works area and clean water diversion drains. Allow for pump in lowest area of excavation to pump dirty runoff to portable silt/sediment removal device/DEB. Use the existing farm crossing as a clean water diversion bund upstream of the works, and maintain Culvert 3 live for as long as possible during the works. Allow for clean water diversion pump to be available for diversion of stream water if necessary.
2. Groundwater piezometers are planned to be installed in this area to check groundwater depths within Area A2/H as part of detailed design. If necessary, based on the groundwater depth findings, install a number of dewatering wells or wellpoints or temporary pump for dewatering to lower the groundwater table within the works area.
3. Mark out the approximate alignment of Culvert 3 pre-works (assumed straight line between inlet and outlet). Trafficking over this culvert should be minimised during the works, with refuse being shifted from Area A2/H to A1/B by truck via the existing farm crossing. The best available information indicates that the top of Culvert 3 is just over 2m below existing ground level (see Figure 14).
4. Strip existing topsoil and landfill cap from the works area and stockpile separately outside the works area. Refuse layers will then be removed and transferred to Area A1 by truck. Fill material (that is not refuse) will either be transferred to Area A1 or used for other purposes (e.g. cap) depending on its contamination status.
5. Once the refuse has been transferred, construct a compacted toe bund embankment along the western side of the residual A2 Area. Stockpiled landfill material will be placed in the void between the toe bund and refuse as necessary. A low permeability cap will then be placed over the material followed by topsoil. Capping details will be as for Area A1.
6. Cut in the new stream channel (approximately 75m long with base width of 4m with maximum side slopes of 1V:3H, with some meanders), retopsoiling the channel and line with biodegradable coir matting to stabilise it, followed by planting with natives in accordance with the landscaping plan and placement of some rocks and logs. Place clean, stockpiled capping material or clean fill material from Area H to fill any depressions within Area A2 and then retopsoiling, using clean topsoil.
7. For the new outfall to the stream, strip vegetation and trees, install a temporary dam comprising steel shields or similar around the outfall works area and pump out water from inside the dam. Continue the stream channel to connect into the existing stream line with biodegradable coir matting to stabilise it, followed by planting as above.
8. For reinstallation of the new culvert (1350mm dia) (1350mm dia), install this in a downstream to upstream direction starting at the top of the new channel. A temporary dam will be installed as for step 7 on the western side of the existing culvert 3 inlet to isolate the area where the new culvert inlet will be installed, from water in the existing stream which will continue to flow through the existing culvert. Water will then be pumped out from inside the dam. Once the new culvert is 'live', the temporary dams at each end of the stream diversion will be relocated to block off the inlet and outlet to the existing culvert. This culvert (1350mm dia x approximately 60m long) will then be filled with flowable concrete (or similar ~86m<sup>3</sup>) with both ends of this culvert being sealed. Water within this culvert will be pumped out if necessary, or alternatively exfiltrated naturally during the filling process.

- Contractor to monitor weather daily. If medium to large rainfall predicted, contractor to install BIDM cloth from upstream to downstream to allow any flood waters to pass over the earthworks area without uplifting sediment.
- Clean water diversion pump may not be needed, only required if the existing culvert is unable to discharge the water from upstream at a low enough level to prevent water entering the earthworks area, or if the existing culvert is not operational.
- Maximum dirty water catchment area is 0.47ha. Works should be able to be progressively stabilised so that if DEBS are used, a single DEB (max 0.3ha catchment) can be used for all works. Otherwise, two DEBs may be needed to provide for entire works area.
- Where any runoff from within the works area comes into contact with refuse, testing of the treated water discharge is likely to be required to check it can be discharged on-site. If testing shows this is not possible, then any such runoff will either need to be treated further on-site prior to discharge, or be tankered off-site for disposal to an appropriate facility.

[illegible]

**PROJECT DATUMS:**  
LEVEL: Auckland Vertical Datum 194  
COORDINATE: New Zealand Transverse Mercator

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT  
FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

AREAS A2/H & CULVERT 3  
EROSION AND SEDIMENT  
CONTROL PLAN



ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND	09 278 7078
HAWKE'S BAY	06 211 2766
CHRISTCHURCH	03 358 5936
BLENHEIM	03 428 3292
NELSON	03 222 1132
TAURANGA	07 220 9272

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS: **FOR RESOURCE CONSENT**

Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE 1:500 (A3)

DRAWING No.	REVISION
-------------	----------

33097/LF390 A

E:\33 series\33097\03 Drawings\33097-LF390.dwg, Ibtobles, 21/11/2024 12.52 pm













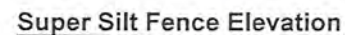
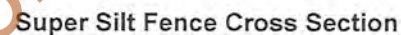




Diagram illustrating the connection of two roof sections, Section A and Section B, using wooden battens. The diagram shows the overlap of the wooden battens and the use of staples and screws to secure them together.

- Overlap wooden battens
- Staple
- Staple
- Section B
- Section A
- Screw together
- Staple
- Staple

### Silt Fence Standard Fabric Join



NOT FOR CONSTRUCTION

[illegible]

PROJECT DATUMS:

**PROJECT DATUMS:**  
 LEVEL: Auckland Vertical Datum 1946  
 COORDINATE: New Zealand Transverse Mercator

CLIENT

TOITU TE WHENUA LAND  
INFORMATION NEW ZEALAND

PROJECT

FORMER TOKANUI HOSPITAL  
DEMOLITION AND REMEDIATION  
PROJECT

TABLE

EROSION AND SEDIMENT  
CONTROL DETAILS PAGE 1



Fraser  
Thomas

ENGINEERS • RESOURCE MANAGERS • SURVEYORS

AUCKLAND	09 278 7078
HAWKE'S BAY	06 211 2766
CHRISTCHURCH	03 358 5936
BLENHEIM	03 428 3292
NELSON	03 222 1132
TAURANGA	020 4118 9465

[www.fraserthomas.co.nz](http://www.fraserthomas.co.nz)

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS

FOR RESOURCE CONSENT

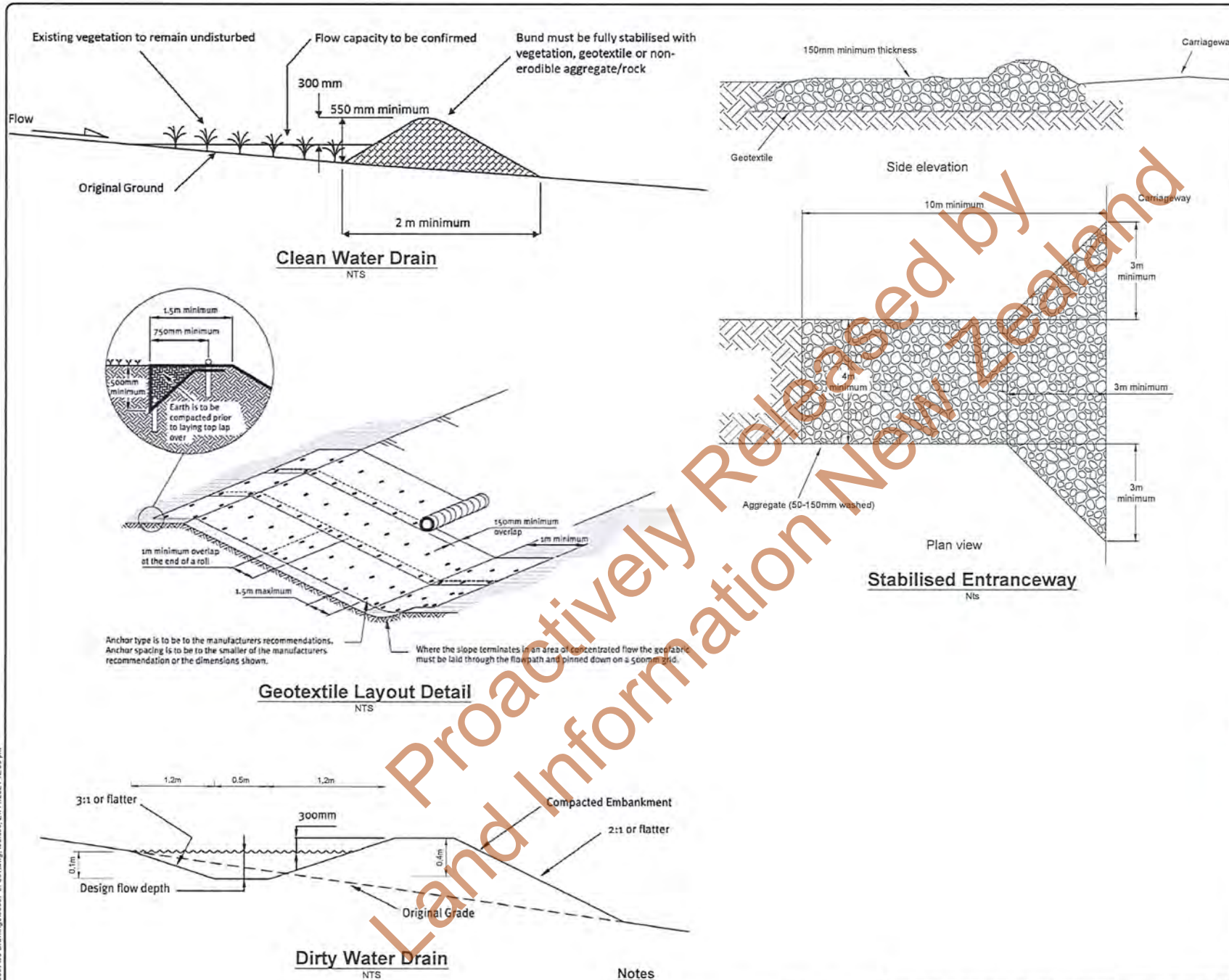
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE NTS (A3)

DRAWING No.	REVISION
-------------	----------

33097/LF550 -





#### Notes

- All works to be carried out in accordance with Waikato Regional Council TR 2009/02 - Erosion and sediment control: guidelines for soil disturbing activities

**NOT FOR CONSTRUCTION**

SURVEYED	TB	14/09/24	APPROVED	DATE
DRAWN	TS	25/09/24	SF	05/11/24
CHECKED	SF	05/11/24		
REVISION	CHANGES	CHECKED	DATE	

PROJECT DATUMS:	
LEVEL:	Auckland Vertical Datum 1946
COORDINATE:	New Zealand Transverse Mercator

CLIENT	TOITU TE WHENUA LAND INFORMATION NEW ZEALAND
PROJECT	FORMER TOKANUI HOSPITAL DEMOLITION AND REMEDIATION PROJECT

TITLE	EROSION AND SEDIMENT CONTROL DETAILS PAGE 2
-------	--

**Fraser Thomas**  
ENGINEERS + RESOURCE MANAGERS + SURVEYORS

AUCKLAND 09 278 7078  
HAWKE'S BAY 06 211 2766  
CHRISTCHURCH 03 358 5936  
BLENHEIM 03 428 3292  
NELSON 03 222 1132  
TAURANGA 07 220 9277

www.fraserthomas.co.nz

The copyright of this design and drawing is vested in Fraser Thomas Ltd, unless otherwise indicated.

STATUS	FOR RESOURCE CONSENT
CONSTRUCTION WORKS SHALL COMMENCE ONLY ON RECEIPT OF AND IN ACCORDANCE WITH THE COUNCIL OR COUNCIL ORGANISATION STAMPED APPROVED DRAWINGS, UNLESS OTHERWISE INDICATED.	
SCALE	NTS (A3)
DRAWING NO.	33097/LF551
REVISION	-



Proactively Released by  
Land Information New Zealand