

**APPENDIX SF4: FTL LANDFILL REPAIR AND UPGRADE WORKS DRAWINGS
– ISSUE SET 6 (20 AUGUST 2025).**

These drawings replace the landfill repair and upgrade plans (Appendix A of Landfill AEE) and the culvert 3 plans (Appendix H of Remediation AEE).

FORMER TOKANUI HOSPITAL

DEMOLITION AND REMEDIATION PROJECT

TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND



33097

FOR TENDER

ISSUE SET 6

20/08/25

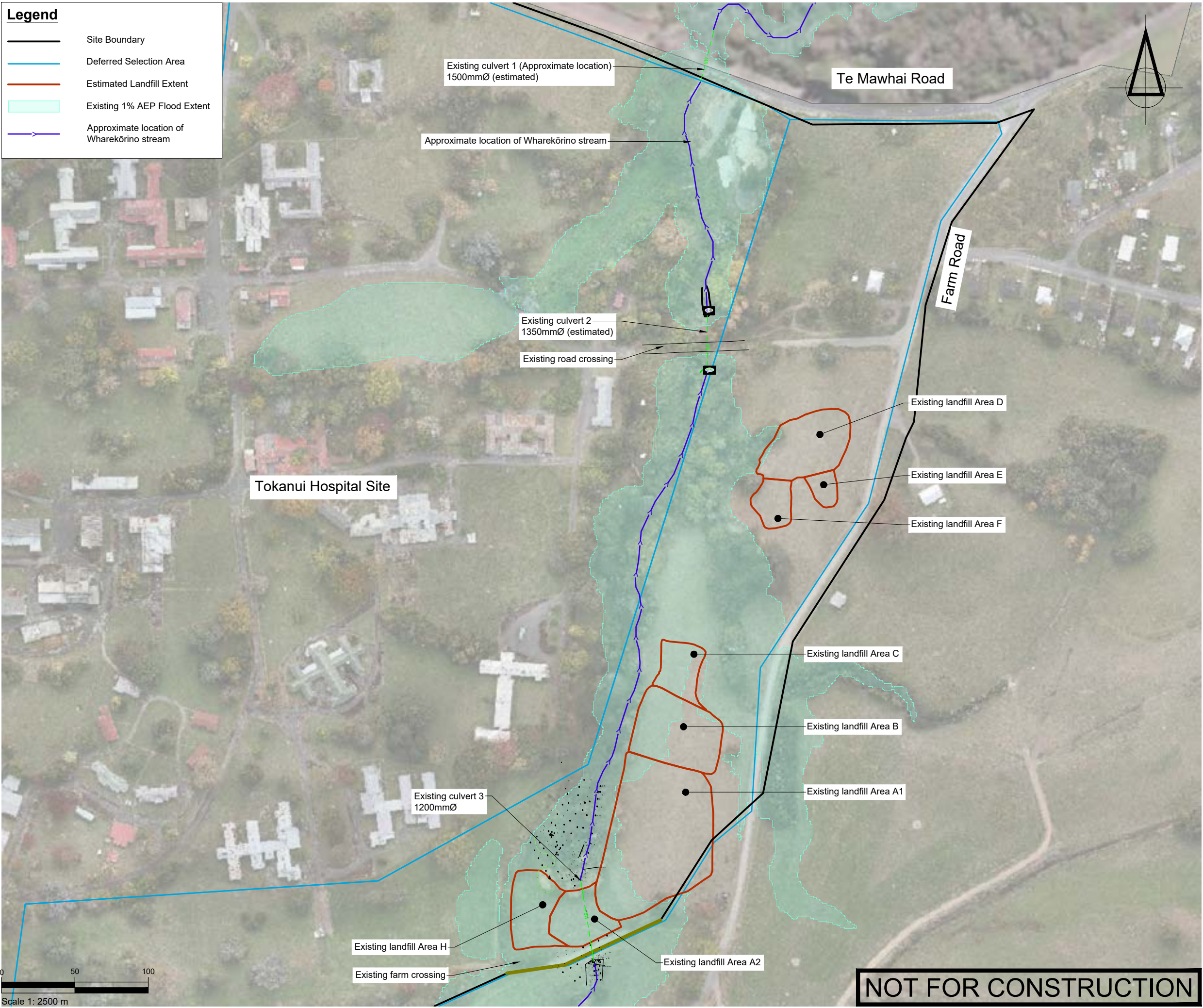
LIST OF DRAWINGS

DRAWING	DRAWING TITLE	ISSUE SET	1	2	3	4	5	6
			7/11/2024	8/11/2024	21/11/2024	19/06/2025	30/06/2025	20/08/2025
33097/LF001	EXISTING LANDFILL OVERVIEW PLAN	-	-	-	A	A	A	
33097/LF002	INTRUSIVE GROUND INVESTIGATION TEST PIT LOCATION PLAN 1 OF 3	-	-	-	A	A	A	
33097/LF003	INTRUSIVE GROUND INVESTIGATION TEST PIT LOCATION PLAN 2 OF 3	-	-	-	A	A	A	
33097/LF004	INTRUSIVE GROUND INVESTIGATION TEST PIT LOCATION PLAN 3 OF 3	-	-	-	A	A	A	
33097/LF010	PROPOSED LANDFILL REMEDIAL WORKS SITE OVERVIEW PLAN	-	-	A	B	B	C	
33097/LF100	EXISTING LANDFILL AREAS D, E AND F PLAN	-	-	-	A	A	A	
33097/LF110	PROPOSED NORTHERN DISPOSAL SITE CELL PROPOSED FINAL DESIGN PLAN	-	-	-	A	A	A	
33097/LF120	PROPOSED NORTHERN DISPOSAL SITE CELL BASE OF CELL LEVELS PLAN	-	-	-	A	A	A	
33097/LF121	PROPOSED NORTHERN DISPOSAL SITE CELL FINISHED GROUND LEVELS PLAN	-	-	-	A	A	A	
33097/LF130	PROPOSED NORTHERN DISPOSAL SITE CELL CROSS SECTIONS	-	-	-	A	A	A	
33097/LF140	PROPOSED NORTHERN DISPOSAL SITE CELL CELL FORMATION CUT AND FILL PLAN	-	-	-	A	A	A	
33097/LF141	PROPOSED NORTHERN DISPOSAL SITE CELL FILLING PLAN	-	-	-	A	A	A	
33097/LF190	PROPOSED NORTHERN DISPOSAL SITE CELL EROSION AND SEDIMENT CONTROL PLAN PHASE 1	-	-	-	A	A	A	
33097/LF191	PROPOSED NORTHERN DISPOSAL SITE CELL EROSION AND SEDIMENT CONTROL PLAN PHASE 2	-	-	-	A	A	A	
33097/LF200	EXISTING LANDFILL AREAS A1, B, AND C PLAN	-	-	-	A	A	A	
33097/LF210	PROPOSED SOUTHERN DISPOSAL SITE CELL PROPOSED FINAL DESIGN PLAN	-	-	A	B	B	B	
33097/LF219	PROPOSED SOUTHERN DISPOSAL SITE CELL PROPOSED TOE BUND PLAN	-	-	-	A	A	A	
33097/LF220	PROPOSED SOUTHERN DISPOSAL SITE CELL BASE OF CELL LEVELS PLAN	-	-	A	B	B	B	
33097/LF221	PROPOSED SOUTHERN DISPOSAL SITE CELL FINISHED GROUND LEVELS PLAN	-	-	A	B	B	B	
33097/LF230	PROPOSED SOUTHERN DISPOSAL SITE CELL CROSS SECTIONS SHEET 1	-	-	A	B	B	B	
33097/LF231	PROPOSED SOUTHERN DISPOSAL SITE CELL CROSS SECTIONS SHEET 2	-	-	-	A	A	A	
33097/LF238	PROPOSED SOUTHERN DISPOSAL SITE CELL REFUSE EXCAVATION PLAN	-	-	-	A	A	A	
33097/LF239	PROPOSED SOUTHERN DISPOSAL SITE CELL TOE BUND CONSTRUCTION PLAN	-	-	-	A	A	A	

33097/LF240	PROPOSED SOUTHERN DISPOSAL SITE CELL CELL FORMATION CUT AND FILL PLAN	-	-	A	B	B	B	
33097/LF241	PROPOSED SOUTHERN DISPOSAL SITE CELL REFUSE FILLING PLAN	-	-	A	B	B	B	
33097/LF250	PROPOSED SOUTHERN DISPOSAL SITE CELL GROUNDWATER DRAIN LONG SECTION AND DETAIL	-	-	A	B	B	B	
33097/LF289	PROPOSED SOUTHERN DISPOSAL SITE CELL EROSION AND SEDIMENT CONTROL PLAN PHASE 0	-	-	-	A	A	A	
33097/LF290	PROPOSED SOUTHERN DISPOSAL SITE CELL EROSION AND SEDIMENT CONTROL PLAN PHASE 1	-	-	A	B	B	B	
33097/LF291	PROPOSED SOUTHERN DISPOSAL SITE CELL EROSION AND SEDIMENT CONTROL PLAN PHASE 2	-	-	A	B	B	B	
33097/LF300	EXISTING LANDFILL AREAS A2 AND AREA H, AND EXISTING CULVERT 3 PLAN	-	-	-	A	A	A	
33097/LF310	AREAS A2/H & CULVERT 3 PROPOSED FINAL DESIGN PLAN	-	A	A	B	C	D	
33097/LF311	INDICATIVE VEGETATION REMOVAL PLAN	-	-	-	A	A	A	
33097/LF312	INDICATIVE STREAM CONSTRUCTION PLAN 1	-	-	-	-	-	A	
33097/LF313	INDICATIVE STREAM CONSTRUCTION PLAN 2	-	-	-	-	-	A	
33097/LF320	AREAS A2/H & CULVERT 3 REFUSE UNDERCUT PLAN	-	-	-	A	A	A	
33097/LF321	AREAS A2/H & CULVERT 3 FINISHED LEVELS PLAN	-	-	-	A	A	B	
33097/LF330	AREAS A2/H & CULVERT 3 CROSS SECTION PLAN 1	-	-	-	A	A	A	
33097/LF331	AREAS A2/H & CULVERT 3 CROSS SECTION PLAN 2	-	-	-	-	-	A	
33097/LF340	AREAS A2/H & CULVERT 3 UNDERCUT STRIP PLAN	-	-	-	A	A	A	
33097/LF341	AREAS A2/H & CULVERT 3 FINAL LEVELS CUT AND FILL PLAN	-	-	-	A	A	A	
33097/LF360	AREAS A2/H & CULVERT 3 CULVERT LONG SECTION PLAN	-	A	A	B	C	D	
33097/LF361	AREAS A2/H & CULVERT 3 CULVERT INLET DETAIL	-	-	-	-	-	A	
33097/LF362	AREAS A2/H & CULVERT 3 CULVERT OUTLET DETAIL	-	-	-	-	-	-	
33097/LF390	AREAS A2/H & CULVERT 3 EROSION AND SEDIMENT CONTROL PLAN	-	A	A	B	B	C	
33097/LF500	PROPOSED LANDFILL CELL TYPICAL DETAIL	-	-	-	A	A	A	
33097/LF540	DECANTING EARTH BUND DIMENSIONS PLAN	-	-	-	-	-	-	
33097/LF545	DECANTING EARTH BUND DETAILS	-	-	-	-	-	-	
33097/LF550	EROSION AND SEDIMENT CONTROL DETAILS PAGE 1	-	-	-	A	A	A	
33097/LF551	EROSION AND SEDIMENT CONTROL DETAILS PAGE 2	-	-	-	A	A	A	

Legend

Site Boundary

Deferred Selection Area

SURVEYED			APPROVED SF 05/11/24	DATE	
DESIGNED	TB	14/08/24			
DRAWN	TB	15/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	COORDINATE SYSTEM CHANGED			SF	23/05/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

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TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE
EXISTING LANDFILL OVERVIEW
PLAN

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SCALE 1:2500 (A3)

DRAWING No 33097/LF001 REVISION A

Legend

Site Boundary

Deferred Selection Area

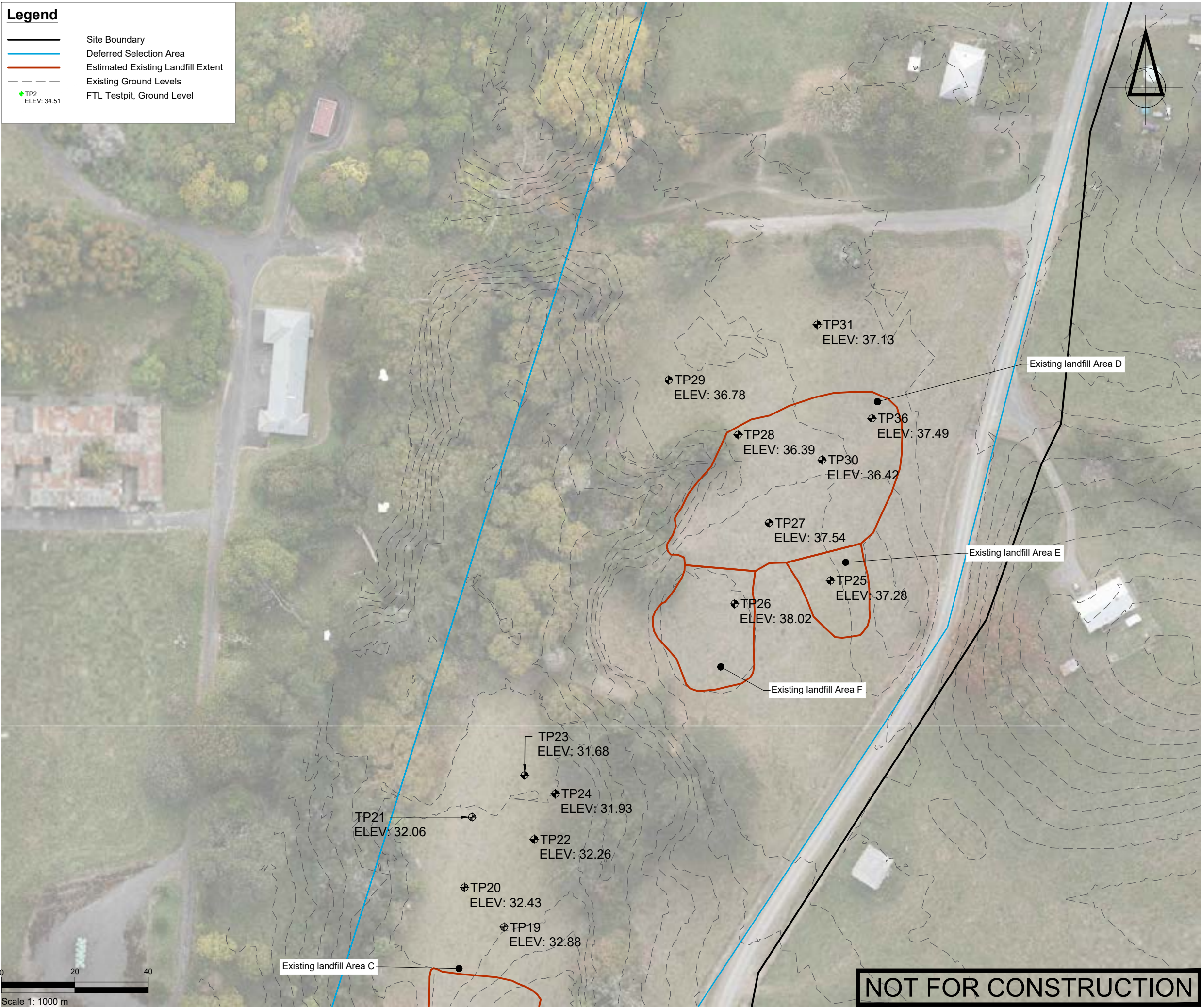
Estimated Existing Landfill Extent

Existing Ground Levels

TP2

ELEV: 34.51

FTL Testpit, Ground Level



SURVEYED	TB	14/08/24	APPROVED	SF	DATE
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INFORMATION NEW ZEALAND

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PROJECT

TITLE

INTRUSIVE GROUND
INVESTIGATION TEST PIT
LOCATION PLAN 1 OF 3

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REVISION A

Legend

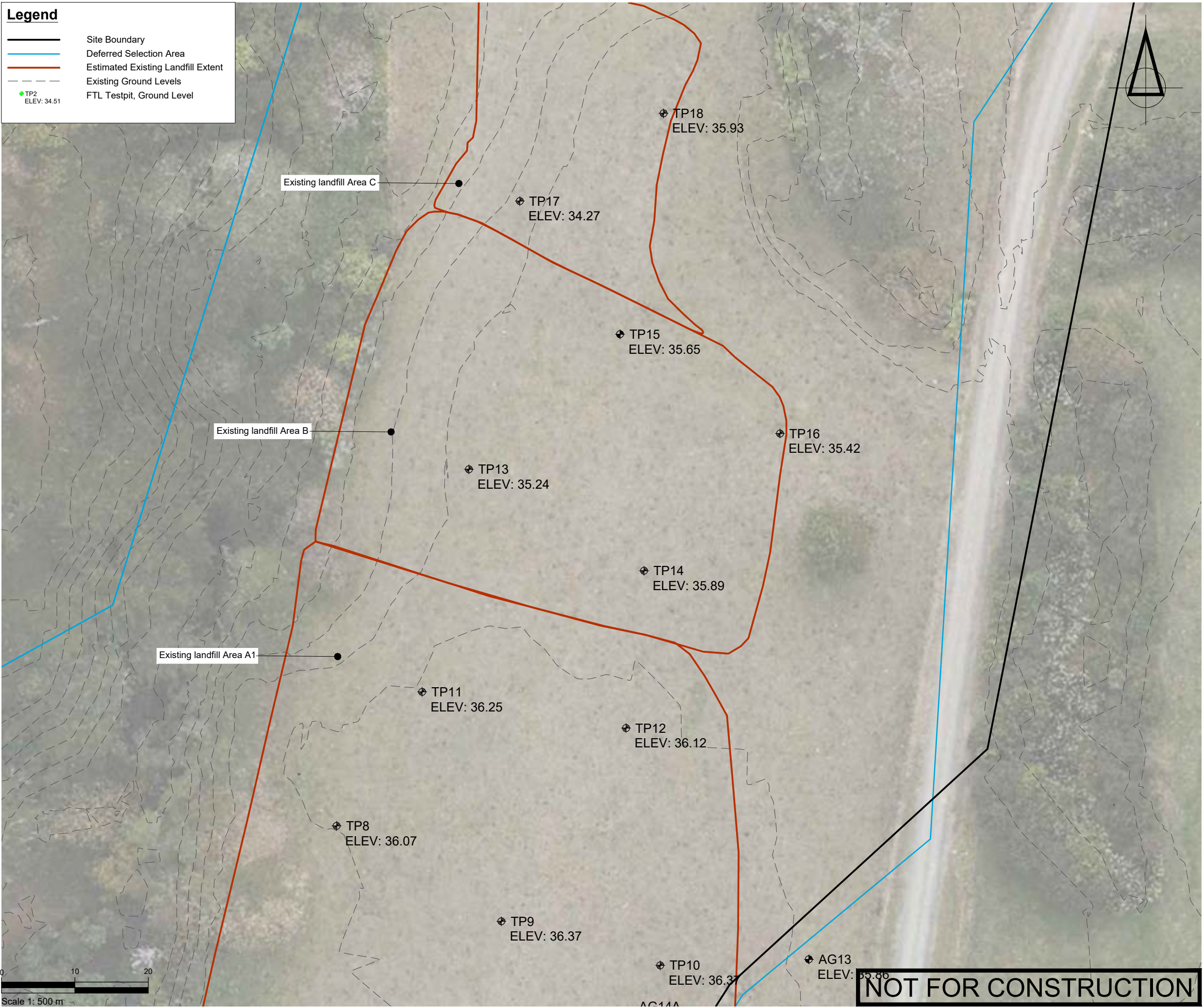
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

FTL Testpit, Ground Level



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DRAWN	TB	15/08/24		05/11/24	
CHECKED	SF	05/11/24			
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TITLE

INTRUSIVE GROUND
INVESTIGATION TEST PIT
LOCATION PLAN 2 OF 3

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DRAWING No 33097/LF003

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Legend

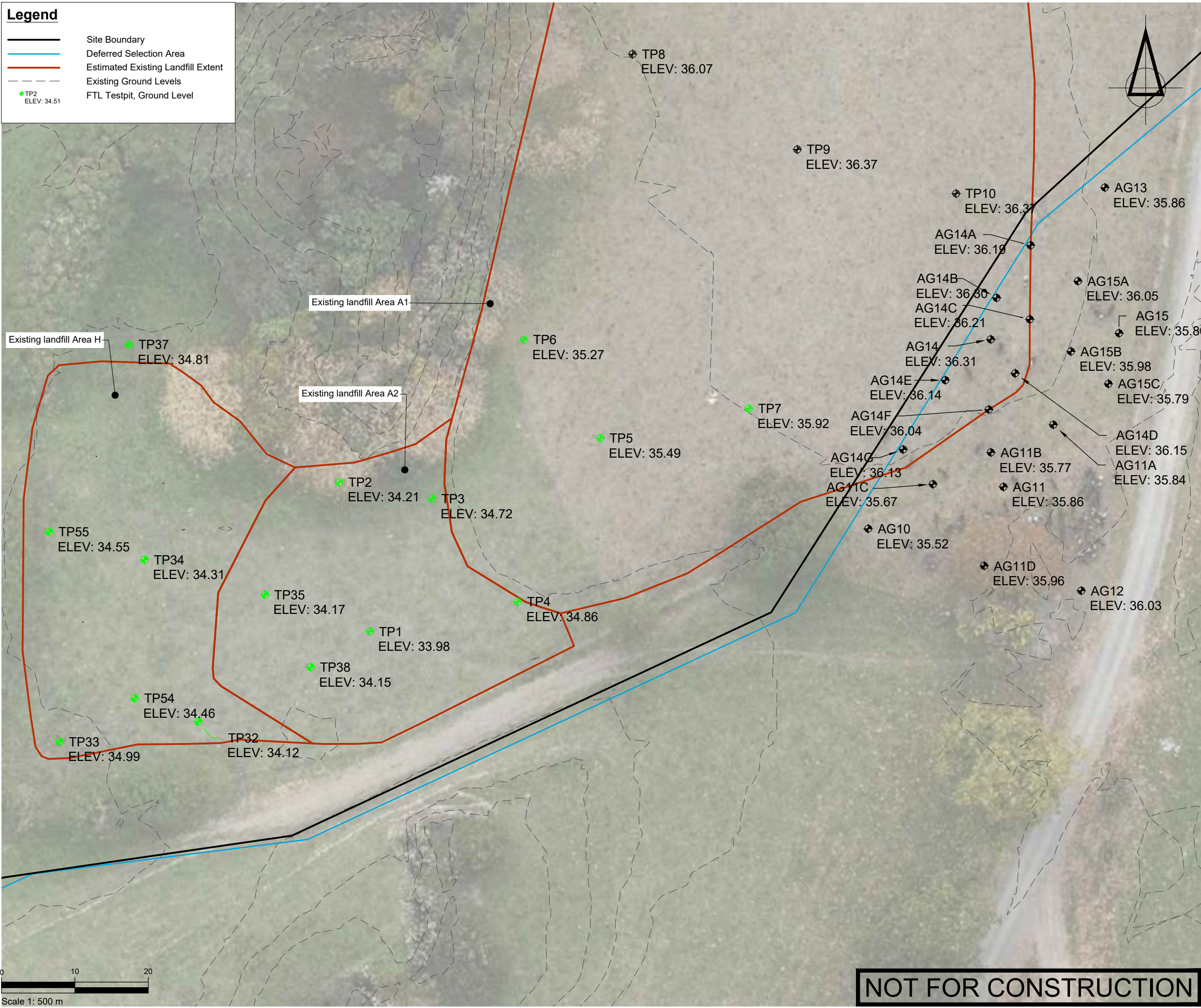
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

FTL Testpit, Ground Level



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CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	COORDINATE SYSTEM CHANGED			SF	23/05/25

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INFORMATION NEW ZEALAND

PROJECT

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DEMOLITION AND REMEDIATION
PROJECT

TITLE

INTRUSIVE GROUND
INVESTIGATION TEST PIT
LOCATION PLAN 3 OF 3

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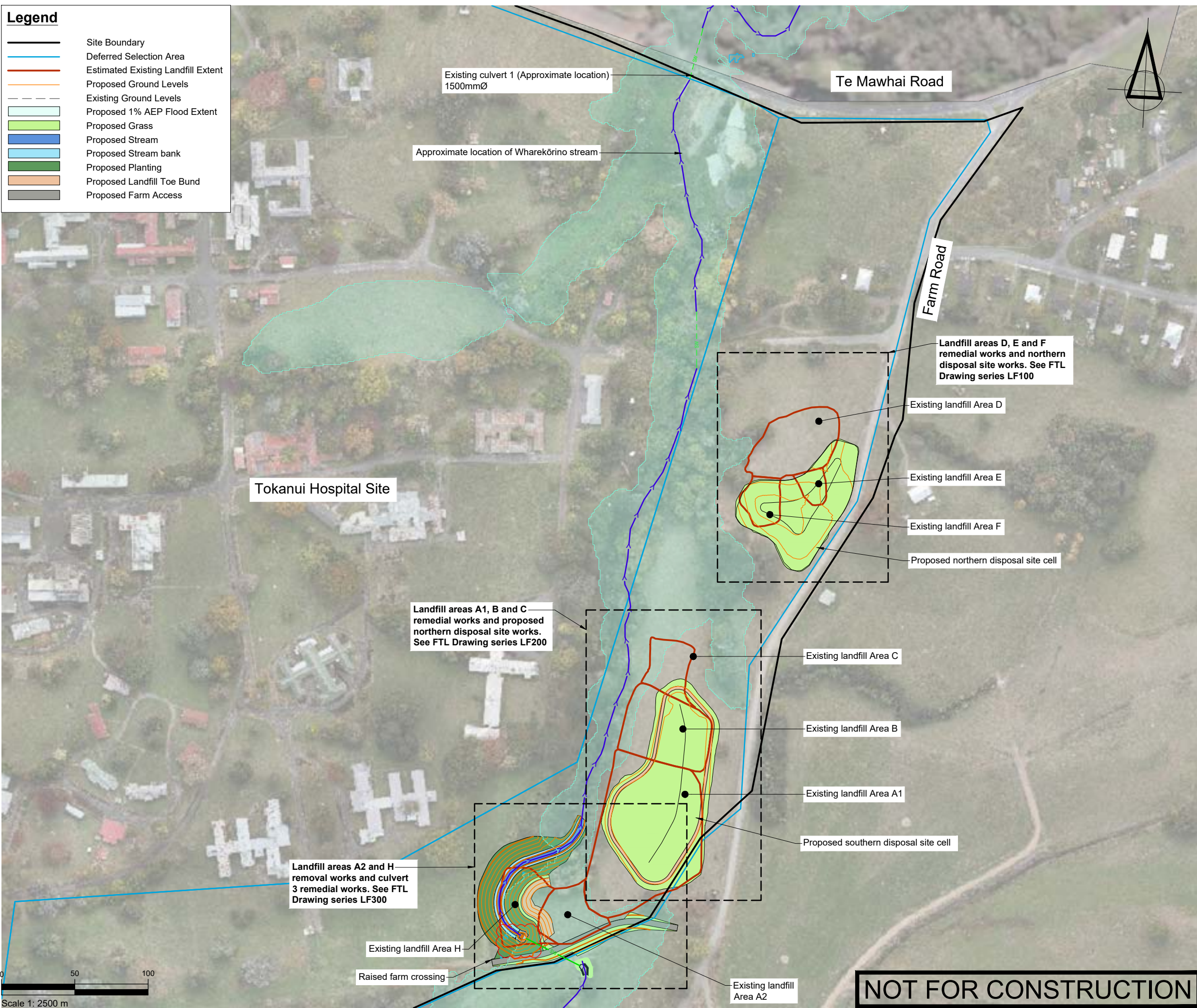
DRAWING No 33097/LF004 REVISION A

NOT FOR CONSTRUCTION

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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



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CHECKED	SF	05/11/24		
			SF	05/11/24
REVISION	CHANGES		CHECKED	DATE
A	STH LF TOE BUND ADDED		SF	20/11/24
B	AREA A2/H REDESIGN		SF	23/05/25
C	CULVERT 3 OUTLET CHANGE		SF	20/08/25

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INFORMATION NEW ZEALAND

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FORMER TOKANUI HOSPITAL
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TITLE
PROPOSED LANDFILL REMEDIAL
WORKS SITE OVERVIEW PLAN

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DRAWING No 33097/LF010 REVISION C

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Legend

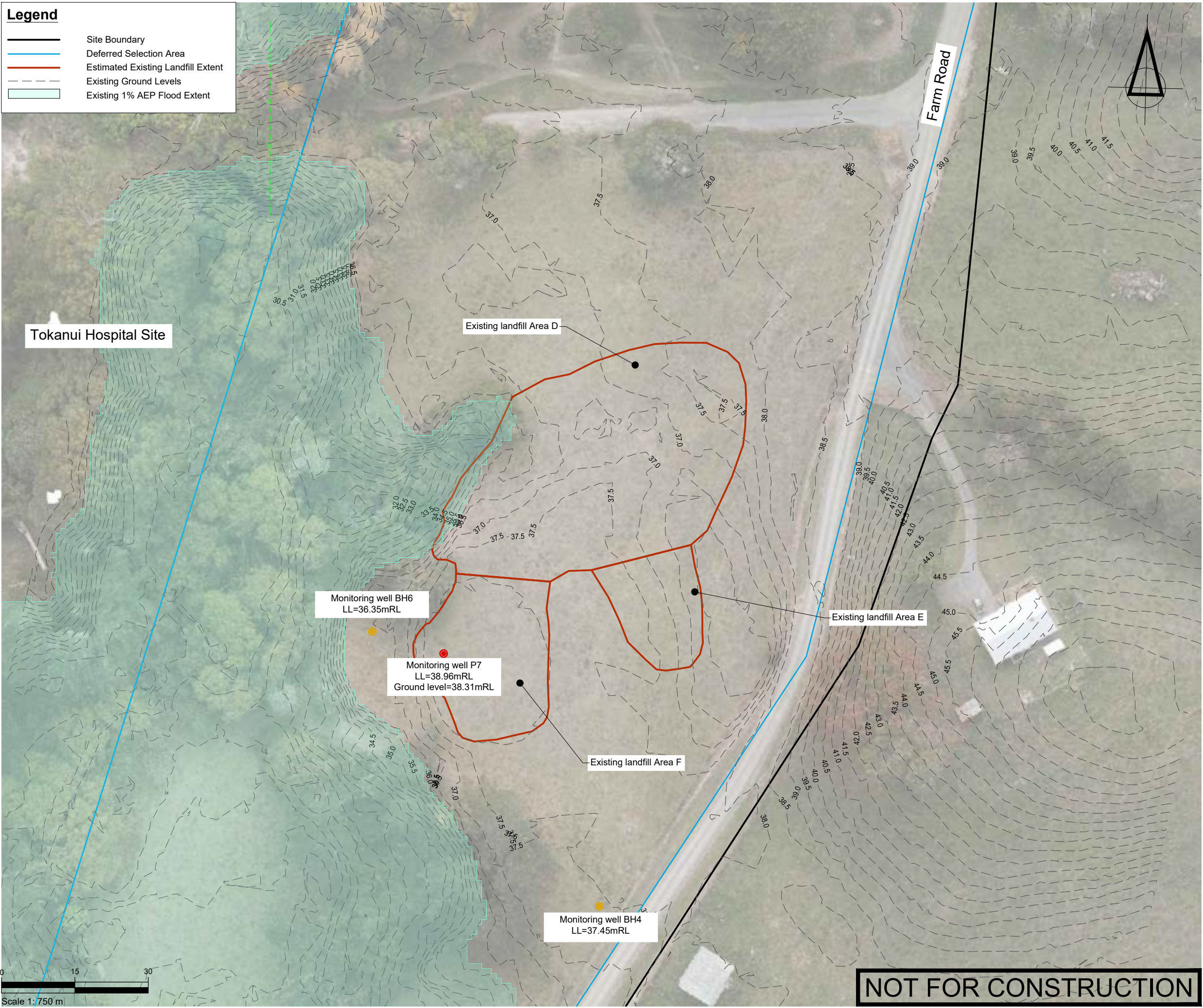
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

Existing 1% AEP Flood Extent



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CHECKED	SF	05/11/24			
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LEVEL: New Zealand Vertical Datum 2016

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INFORMATION NEW ZEALAND

PROJECT

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TITLE

EXISTING LANDFILL AREAS D, E
AND F PLAN

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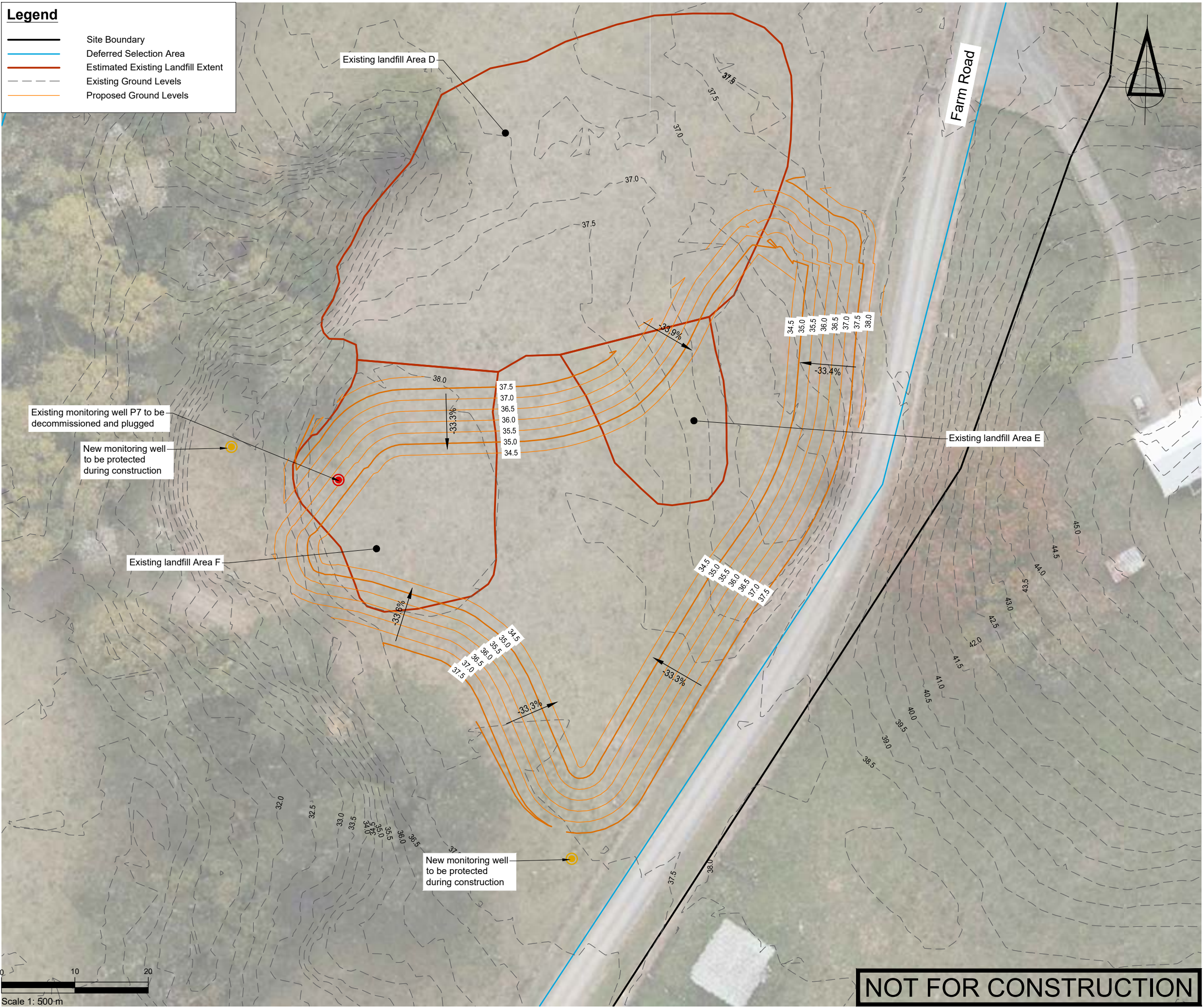
SCALE 1:750 (A3)

DRAWING No 33097/LF100

REVISION A

Legend

- Site Boundary
- Deferred Selection Area
- Estimated Existing Landfill Extent
- Existing Ground Levels
- Proposed Ground Levels



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COORDINATE: New Zealand Transverse Mercator

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PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE
PROPOSED NORTHERN
DISPOSAL SITE CELL
BASE OF CELL LEVELS PLAN



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SCALE 1:500	(A3)
DRAWING No 33097/LF120	REVISION A

NOT FOR CONSTRUCTION

Legend

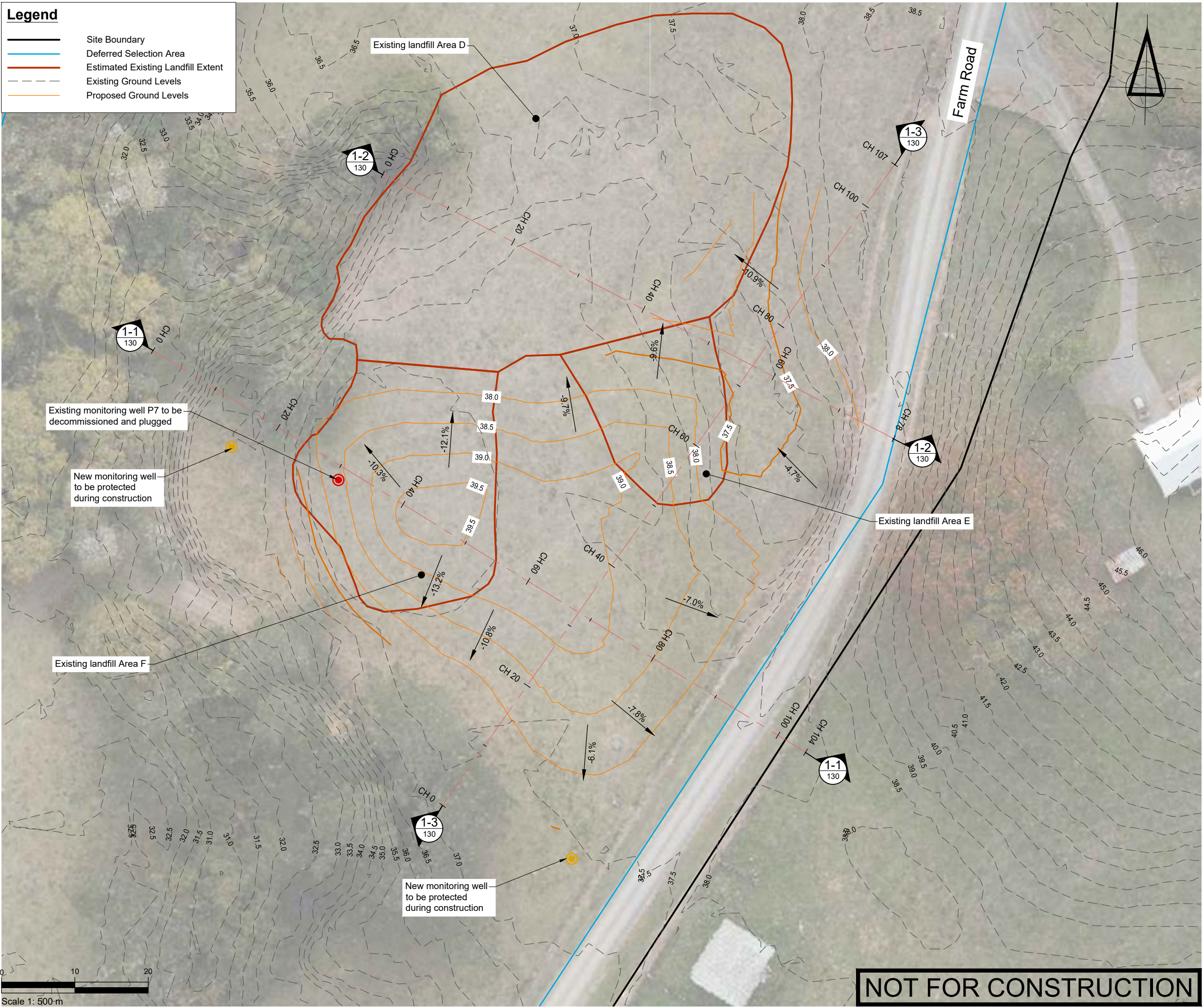
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

Proposed Ground Levels



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CHECKED	SF	05/11/24			
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INFORMATION NEW ZEALAND**

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

TITLE
**PROPOSED NORTHERN
DISPOSAL SITE CELL
FINISHED GROUND LEVELS
PLAN**

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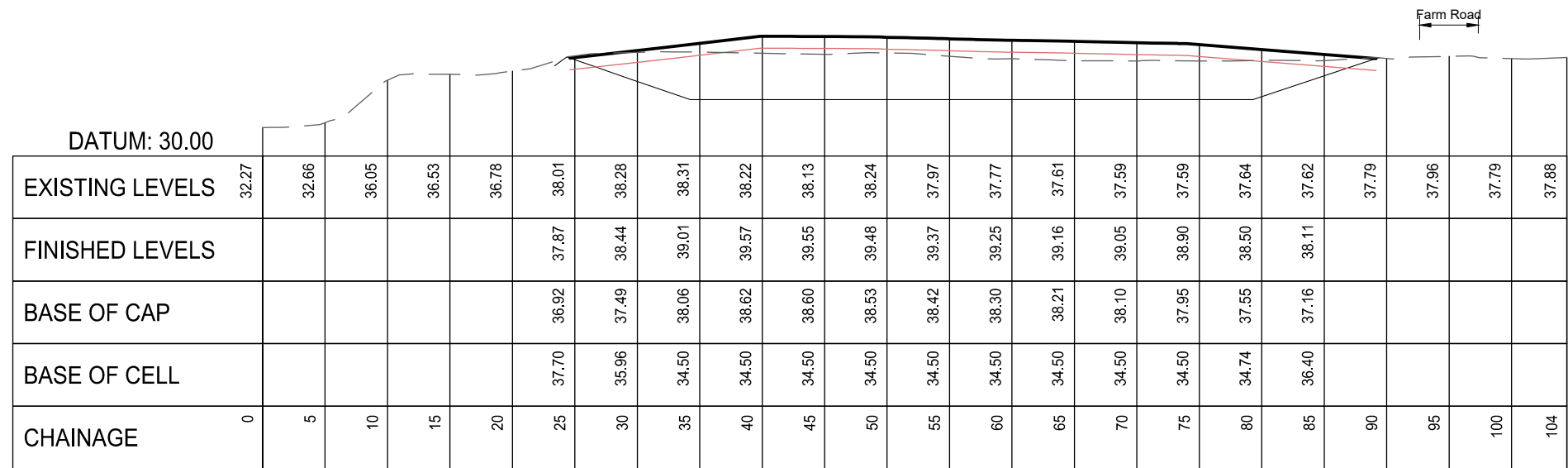
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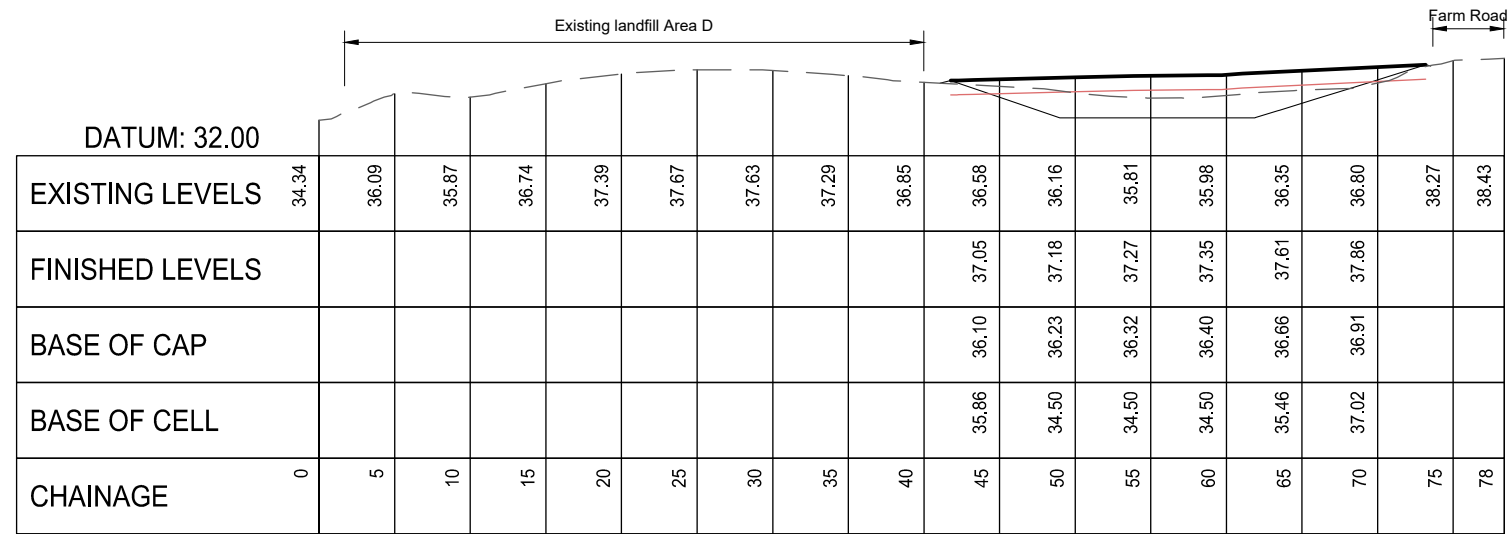
STATUS	
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SCALE	1:500 (A3)
DRAWING No	33097/LF121
REVISION	A

NOT FOR CONSTRUCTION

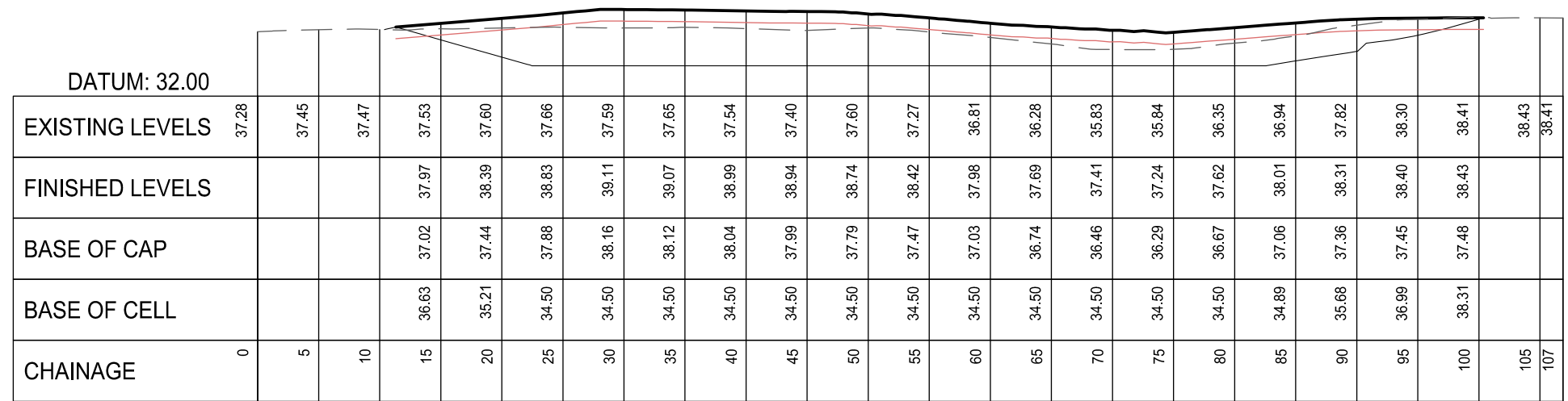
 Existing Ground
 Finished Ground
 Proposed Cap
 Proposed Cell Base



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]

NOTES

PROJECT DATUMS:

LEVEL: New Zealand Vertical Datum 2016
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TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT

FORMER TOKANUI HOSPITAL
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TITLE

PROPOSED NORTHERN DISPOSAL SITE CELL CROSS SECTIONS



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SCALE 1:500 (A3)

DRAWING No	REVISION
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33097/LF130	A
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Legend

- Site Boundary
- Deferred Selection Area
- Estimated Existing Landfill Extent
- Existing Ground Levels
- Proposed Ground Levels

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-3.76	-1.50	Red
2	-1.50	-0.50	Orange
3	-0.50	6.28	Yellow

Landfill Area D
Landfill area to be stripped of topsoil. Install landfill capping layer, and topsoil with grass seed.

Existing landfill Area D

Existing landfill Area F

Farm Road

Existing landfill Area E

Estimated Earthworks Volumes

Northern Disposal Area:

Area = 4000m²

- Strip volumes:
 - Topsoil = 400m³ (assumed 100mm topsoil)
 - Capping material area E = 132m³
 - Capping material area F = 280m³
 - Landfill material area F = 246m³ (estimate offal pit volume)
- Total cut to fill of subgrade
 - Cut = 5900m³
 - Fill = 0m³
 - Balance = 5900m³ cut

Existing Landfill Area D

Area = 2200m²

- Strip volumes:
 - Topsoil = 300m³ (assumed 140mm topsoil)
 - Capping material area D = 0m³ (minimal existing capping)
- Capping volume:
 - Clay or other suitable material = 1800m³
 - Topsoil = 330m³

SURVEYED			APPROVED SF 05/11/24	DATE	
DESIGNED	TB	14/08/24			
DRAWN	TB	21/08/24			
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A	COORDINATE SYSTEM CHANGED			SF	23/05/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
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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



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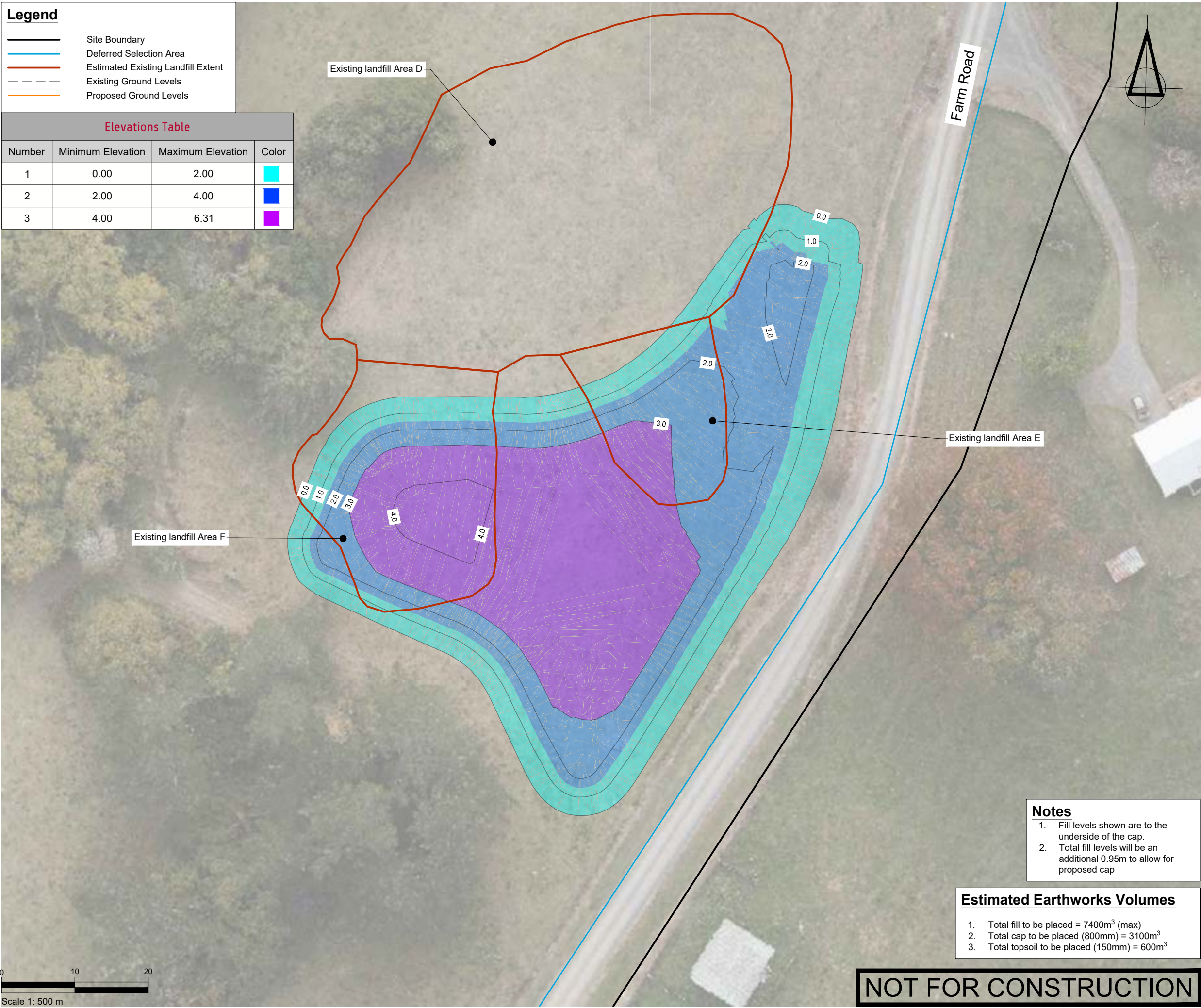
SCALE	1:500	(A3)
DRAWING No	33097/LF140	REVISION
		A

NOT FOR CONSTRUCTION

Legend

- Site Boundary
- Deferred Selection Area
- Estimated Existing Landfill Extent
- Existing Ground Levels
- Proposed Ground Levels

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	0.00	2.00	
2	2.00	4.00	
3	4.00	6.31	



SURVEYED			APPROVED SF 05/11/24	DATE	
DESIGNED	TB	14/08/24			
DRAWN	TB	21/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	COORDINATE SYSTEM CHANGED			SF	23/05/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
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
FILLING PLAN



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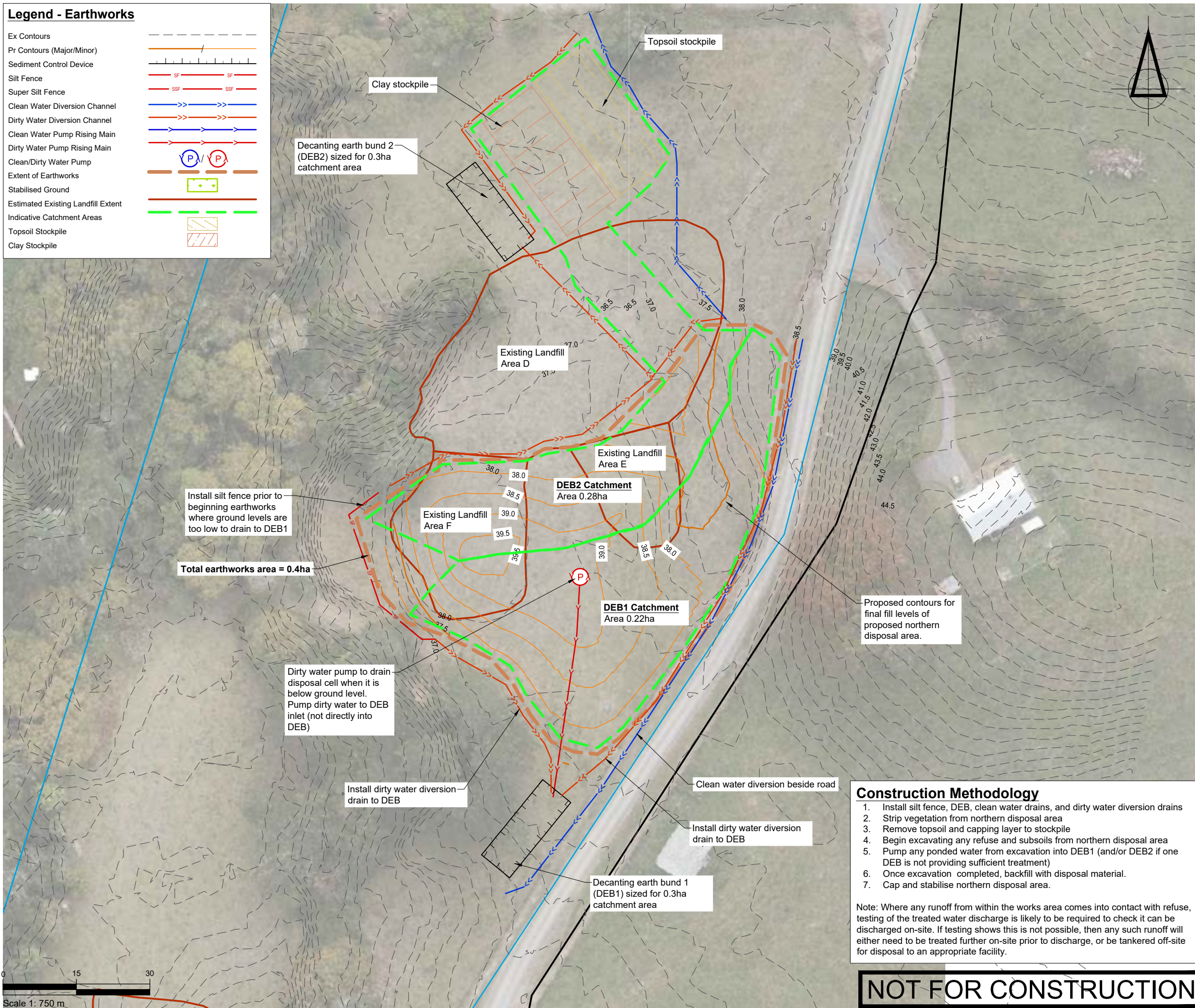
STATUS	
FOR RESOURCE CONSENT	
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.	
SCALE	1:500 (A3)
DRAWING No	33097/LF141
REVISION	A

- Notes**
- Fill levels shown are to the underside of the cap.
 - Total fill levels will be an additional 0.95m to allow for proposed cap

Estimated Earthworks Volumes	
1.	Total fill to be placed = 7400m ³ (max)
2.	Total cap to be placed (800mm) = 3100m ³
3.	Total topsoil to be placed (150mm) = 600m ³

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: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

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TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT

PROJECT

FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

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



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SCALE 1:750 (A3)

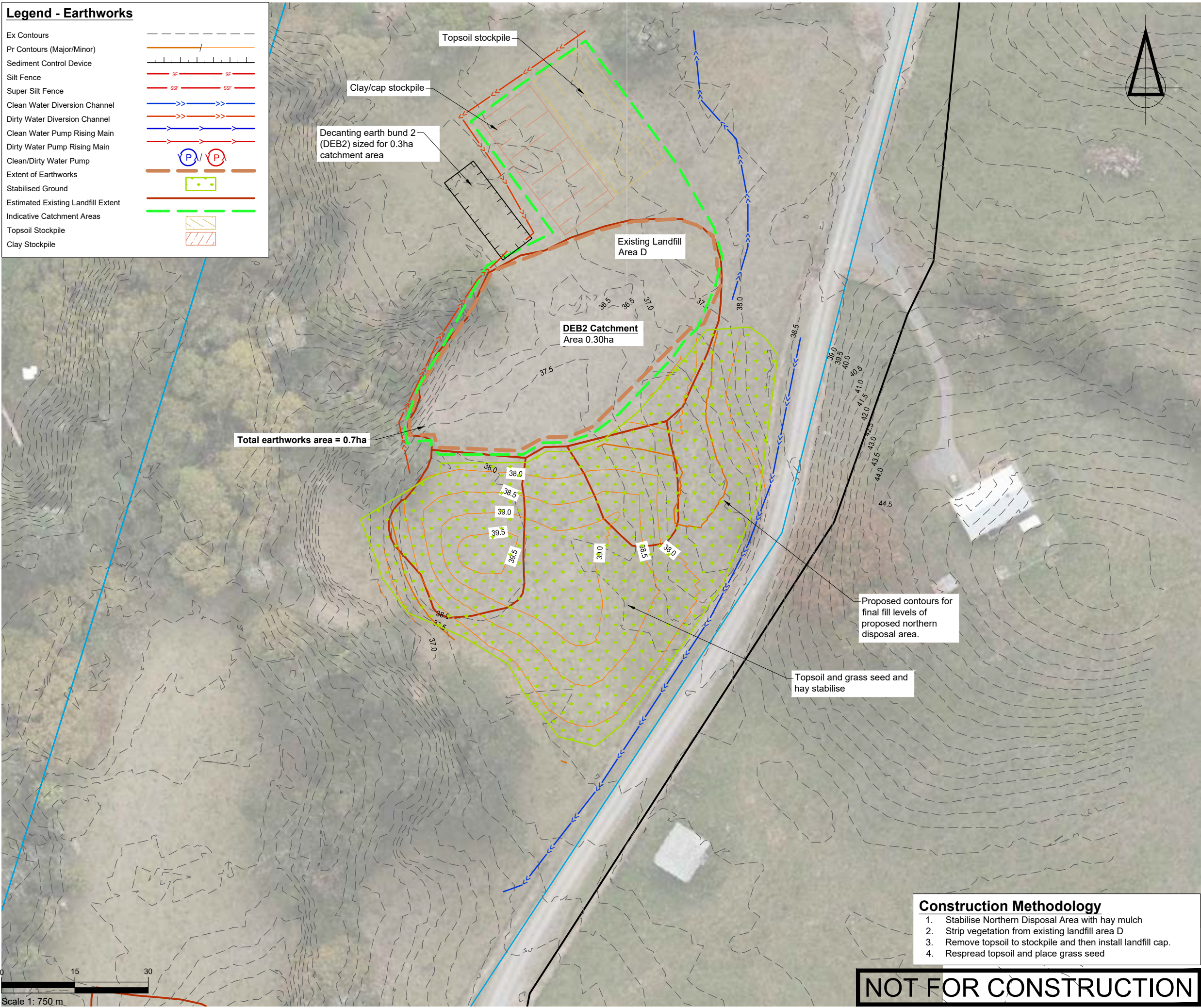
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33097/LF190	A
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Legend - Earthworks

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	



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REVISION	CHANGES			CHECKED	DATE
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NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

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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

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SCALE 1:750 (A3)

DRAWING No 33097/LF191 REVISION A

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

Legend

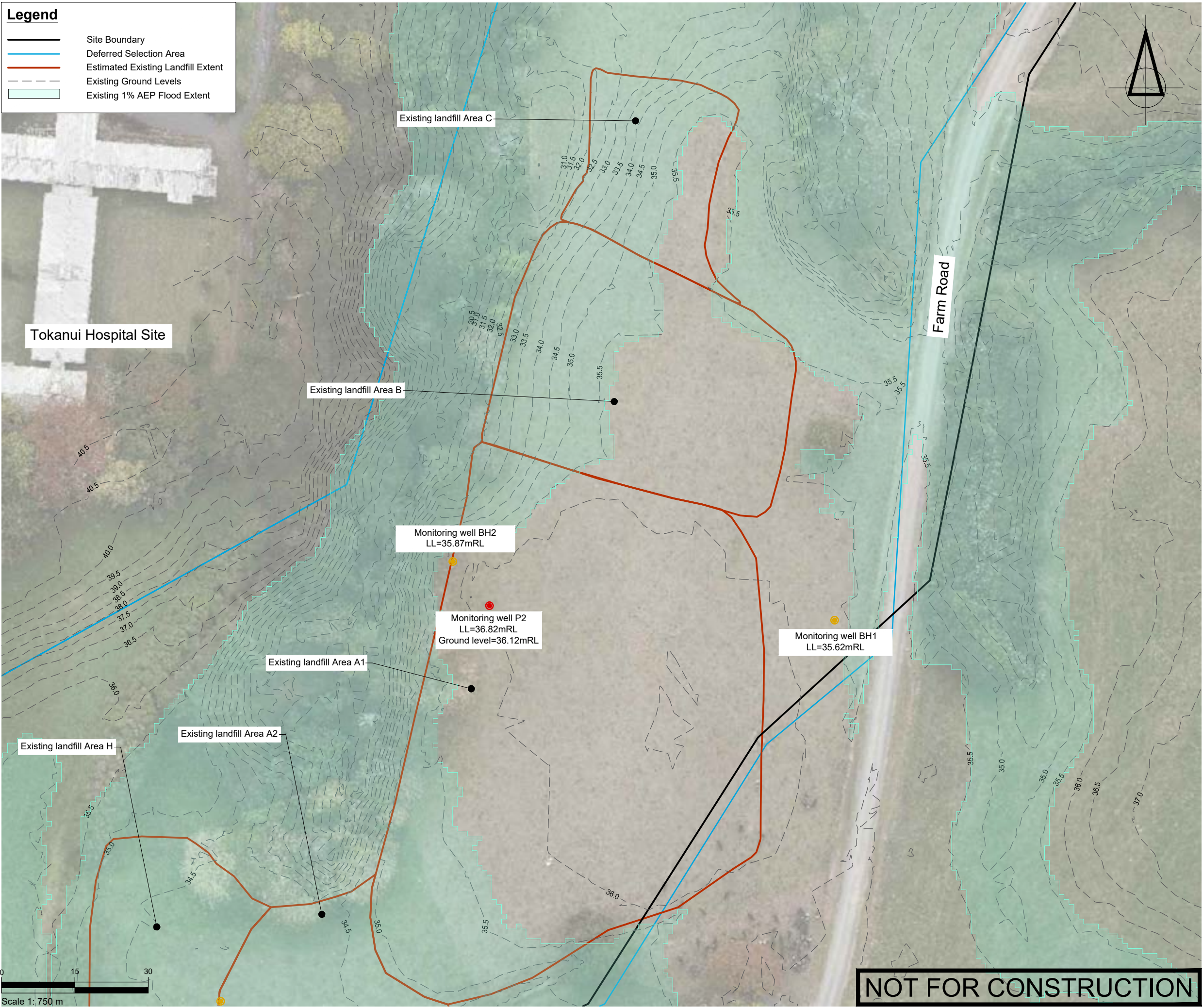
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

Existing 1% AEP Flood Extent



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DRAWN	TB	15/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	COORDINATE SYSTEM CHANGED			SF	23/05/25

NOTES

PROJECT DATUMS:

LEVEL: New Zealand Vertical Datum 2016

COORDINATE: New Zealand Transverse Mercator

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INFORMATION NEW ZEALAND

PROJECT

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DEMOLITION AND REMEDIATION
PROJECT

TITLE

EXISTING LANDFILL AREAS A1,
B, AND C PLAN

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SCALE 1:750 (A3)

DRAWING No 33097/LF200

REVISION A

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 |

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

Landfill Area B (not under Proposed Southern Disposal Site)
Landfill area to be stripped of topsoil.
Excavate capping material to 300mm thick above refuse. Install landfill capping layer, and topsoil with grass seed.

Landfill Area A1 (not under Proposed Southern Disposal Site)
Landfill area to be stripped of topsoil. Excavate capping material to 300mm thick above refuse. Install landfill capping layer, and topsoil with grass seed.

Monitoring well to be protected.

Existing monitoring well P2 to be decommissioned and plugged

Existing landfill Area A1-

Existing landfill Area A2-

Existing landfill Area H.

Farm Road

Groundwater cutoff drain.
Long section and details
shown on FTL Drawing
33097/LF250

—Monitoring well to be protected

— Landfill area outside site boundary to be excavated and area remediated

Proposed Southern Disposal Site Approx 6,275m³ refuse capacity)
Strip topsoil and existing cap to 200mm thickness. Construct new 0.75m high toe bund around perimeter of proposed landfill. Fill excavation with suitable landfill material from the disposal site works. Install landfill cap layer, and topsoil with grass seed.

NOT FOR CONSTRUCTION

[illegible]

NOTES

PROJECT DATUMS:

LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

CLIENT

TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT

FORMER TOKANUI HOSPITAL DEMOLITION AND REMEDIATION PROJECT

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PROPOSED SOUTHERN
DISPOSAL SITE CELL
PROPOSED FINAL DESIGN PLAN



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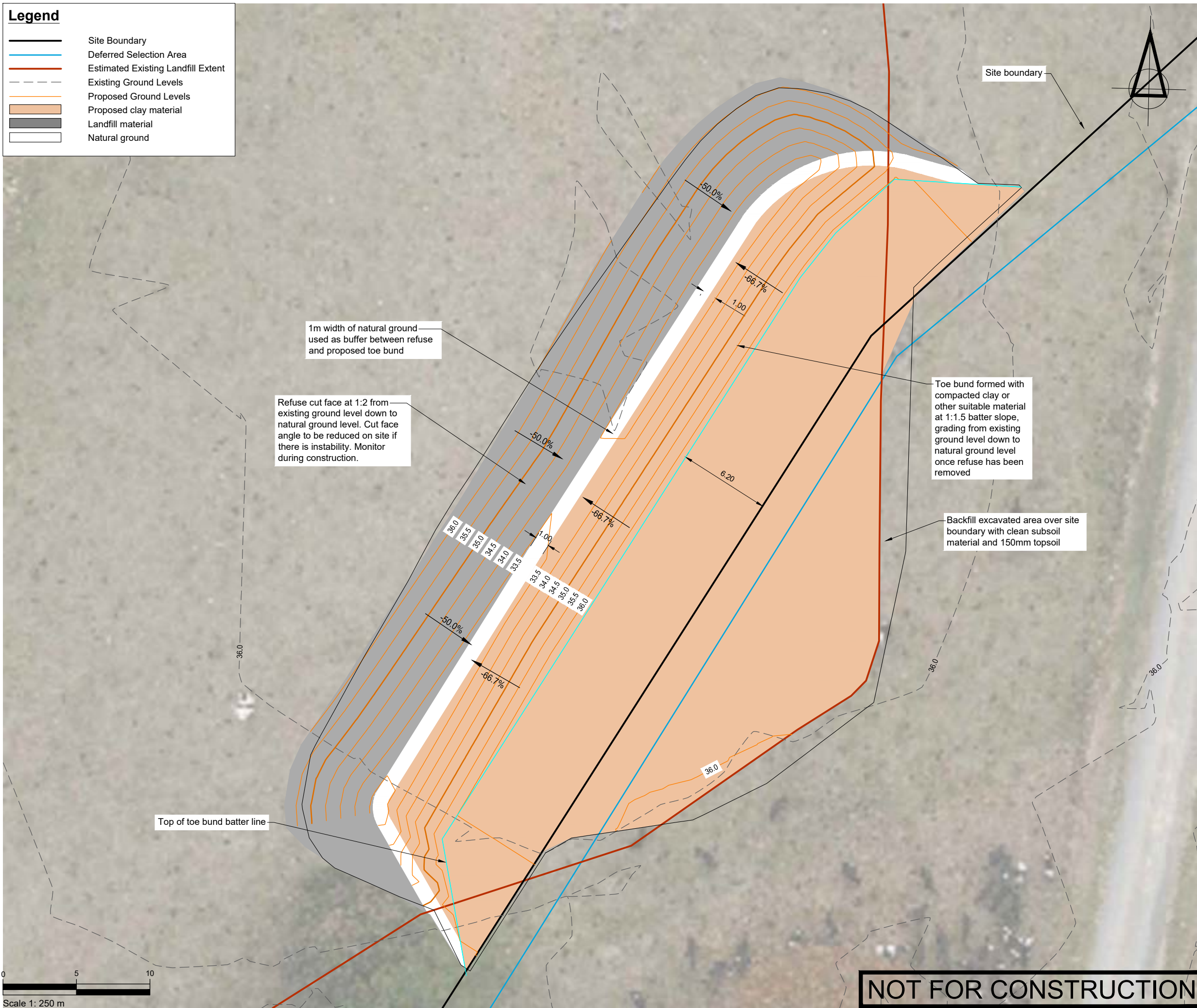
DRAWING No

33097/LF210

REVISION

B

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

[illegible]

NOTES

PROJECT DATUMS:
 LEVEL: New Zealand Vertical Datum 2016
 COORDINATE: New Zealand Transverse Mercator

CLIENT

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INFORMATION NEW ZEALAND

PROJECT

FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

PROPOSED SOUTHERN
DISPOSAL SITE CELL
PROPOSED TOE BUND PLAN

STATUS

FOR RESOURCE CONSENT

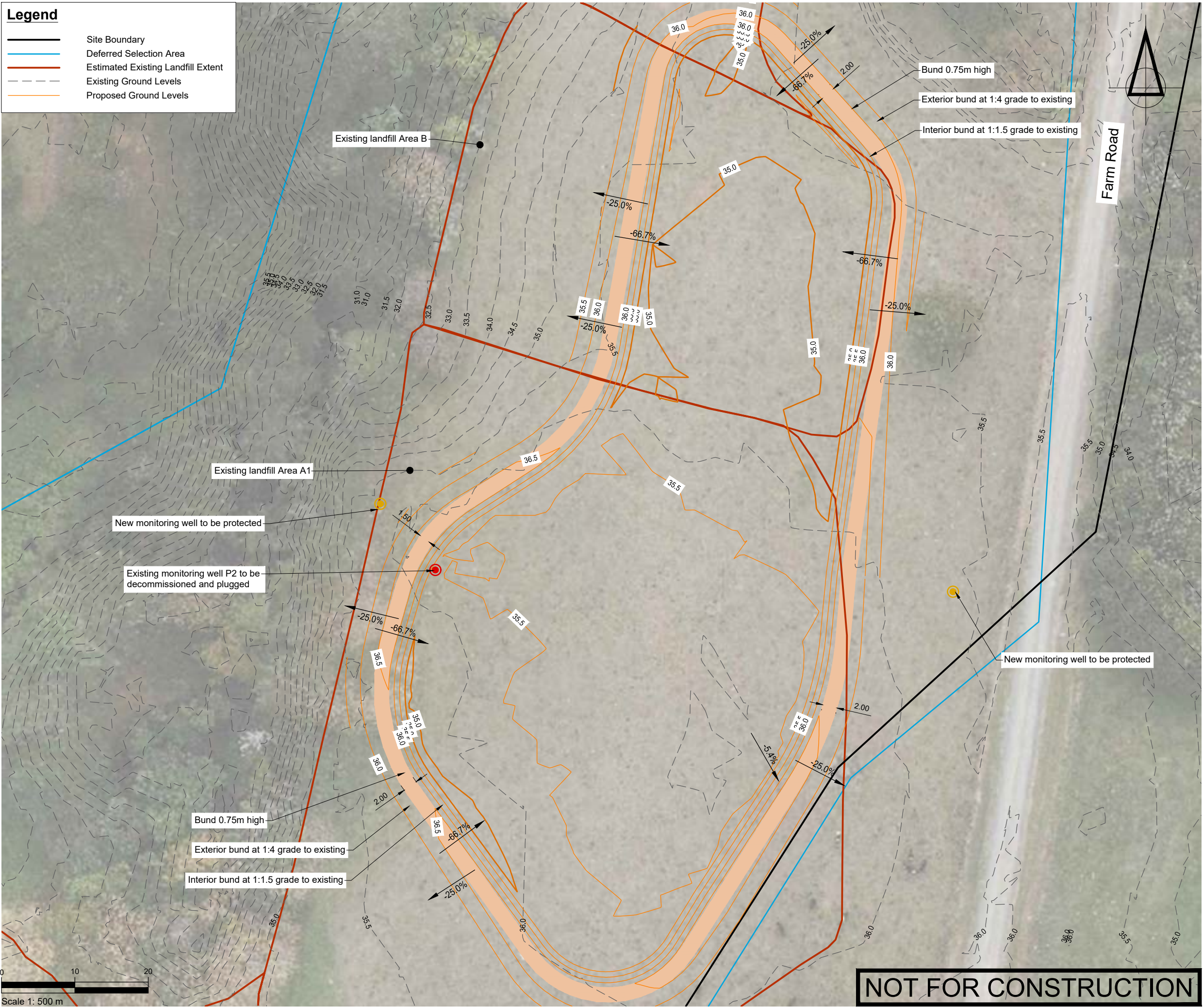
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SCALE 1:250 (A3)

DRAWING No 33097/LE219 REVISION A

Legend

- Site Boundary
- Deferred Selection Area
- Estimated Existing Landfill Extent
- Existing Ground Levels
- Proposed Ground Levels



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REVISION	CHANGES			CHECKED	DATE
A	STH LF TOE BUND ADDED			SF	20/11/24
B	COORDINATE SYSTEM CHANGED			SF	23/05/25

NOTES

PROJECT DATUMS:
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INFORMATION NEW ZEALAND

PROJECT

FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

PROPOSED SOUTHERN
DISPOSAL SITE CELL
BASE OF CELL LEVELS PLAN



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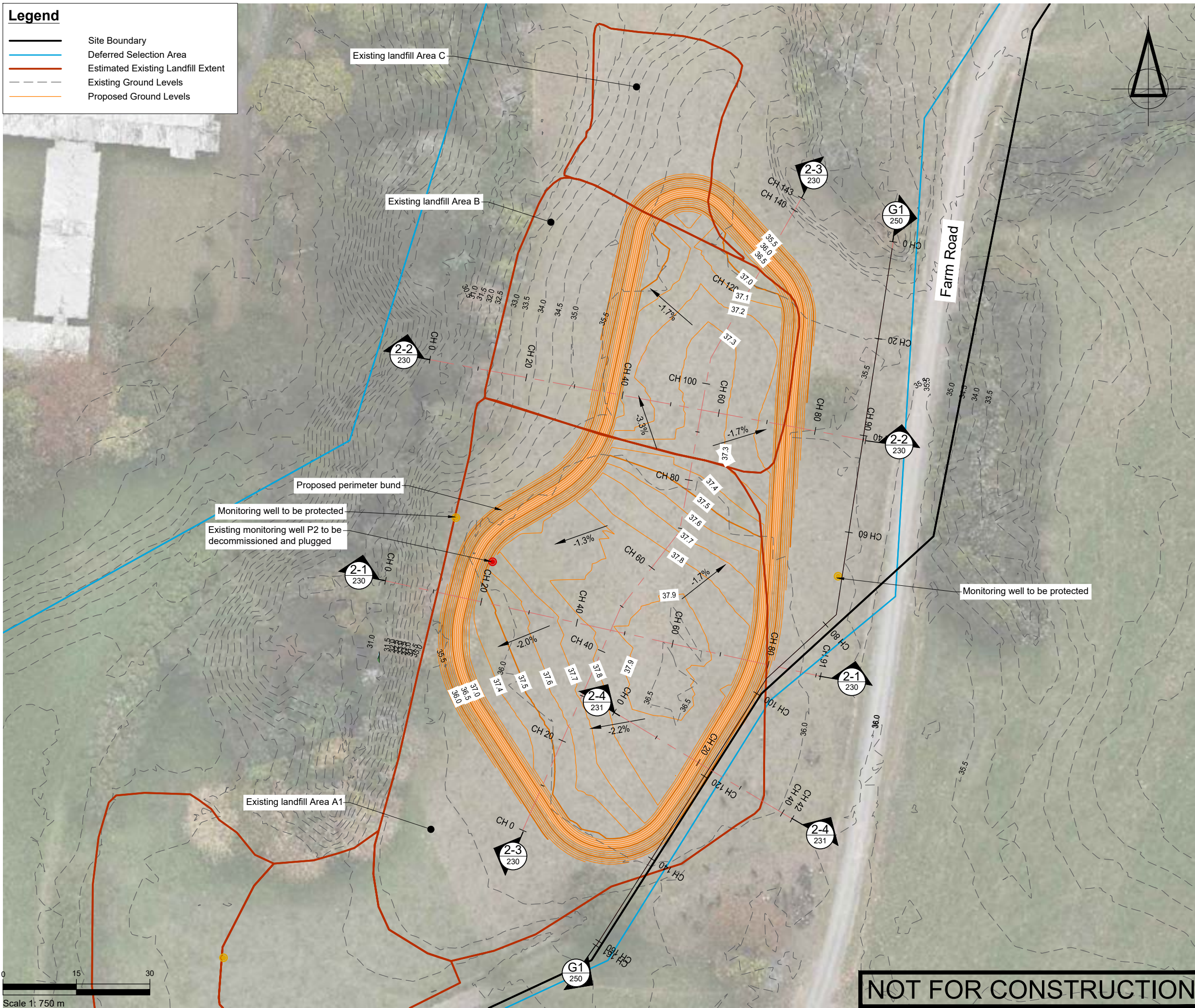
STATUS

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SCALE	1:500	(A3)
DRAWING No	33097/LF220	REVISION
		B

 Site Boundary
 Deferred Selection Area
 Estimated Existing Landfill Extent
 Existing Ground Levels
 Proposed Ground Levels

[illegible]

NOTES

PROJECT DATUMS:

LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

CLIENT

TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT

PROJECT

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DEMOLITION AND REMEDIATION
PROJECT

TITLE

PROPOSED SOUTHERN DISPOSAL SITE CELL FINISHED GROUND LEVELS PLAN



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SCALE 1:750

A3)

DRAWING No.

33097/LF221

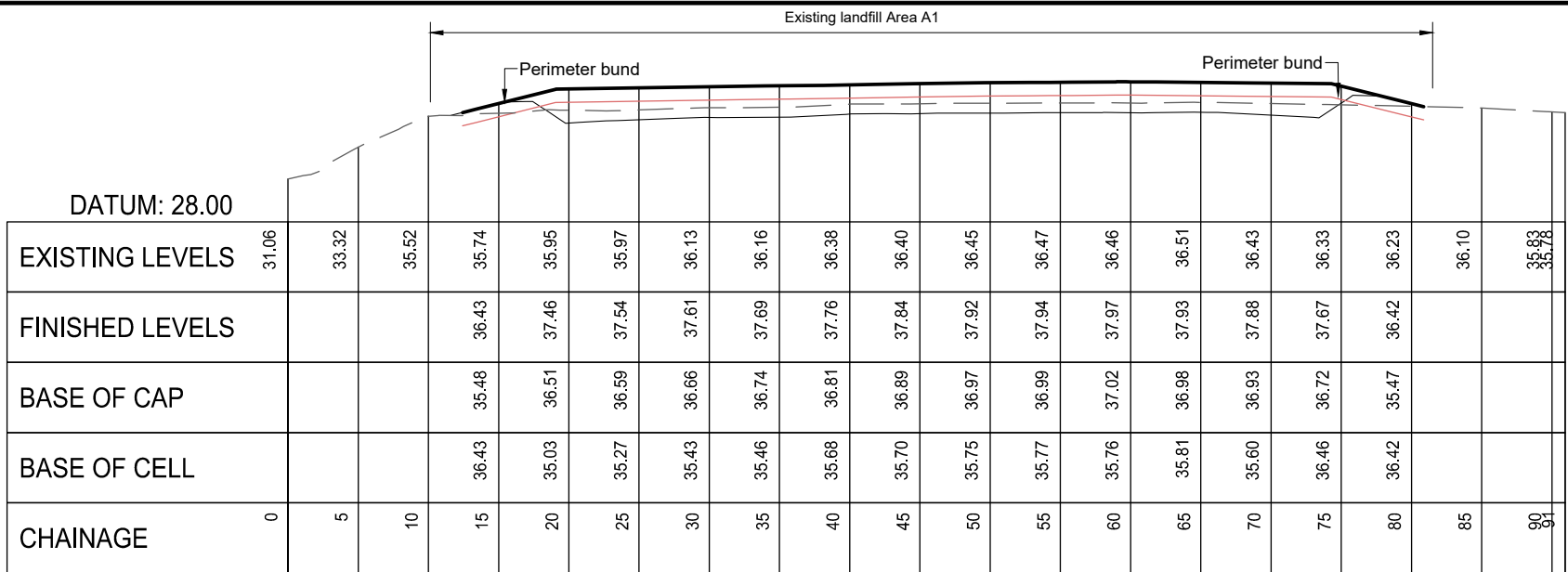
REVISION

B

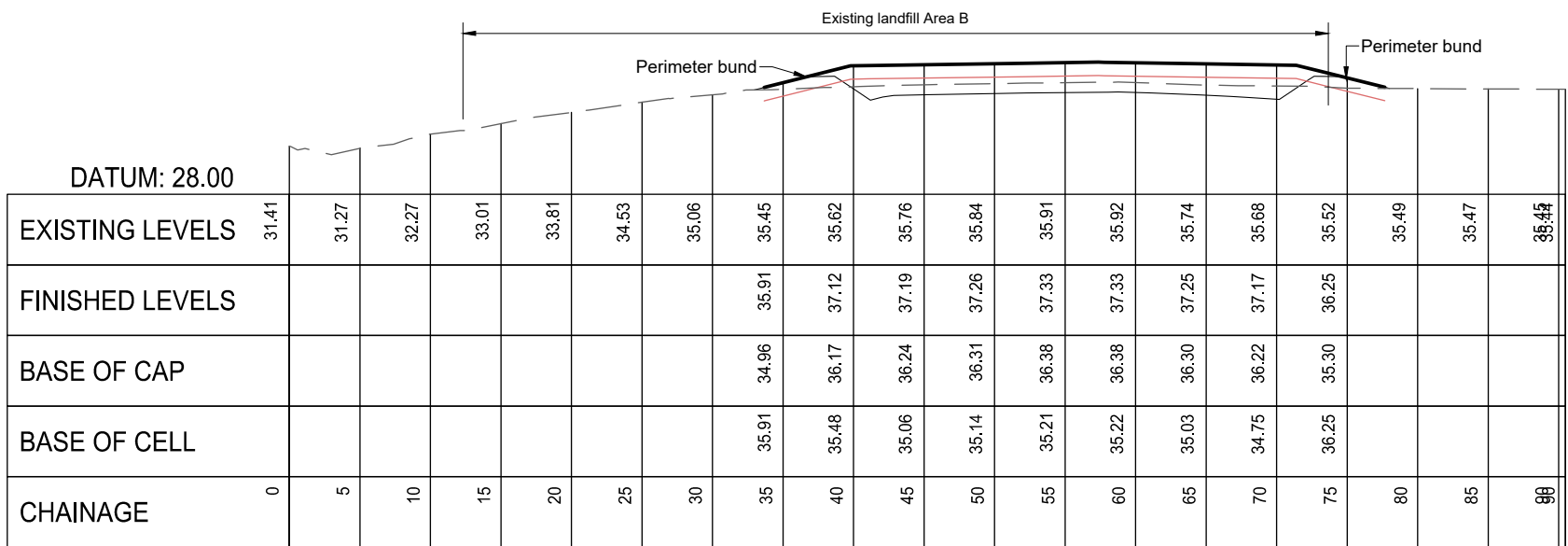
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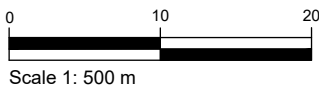
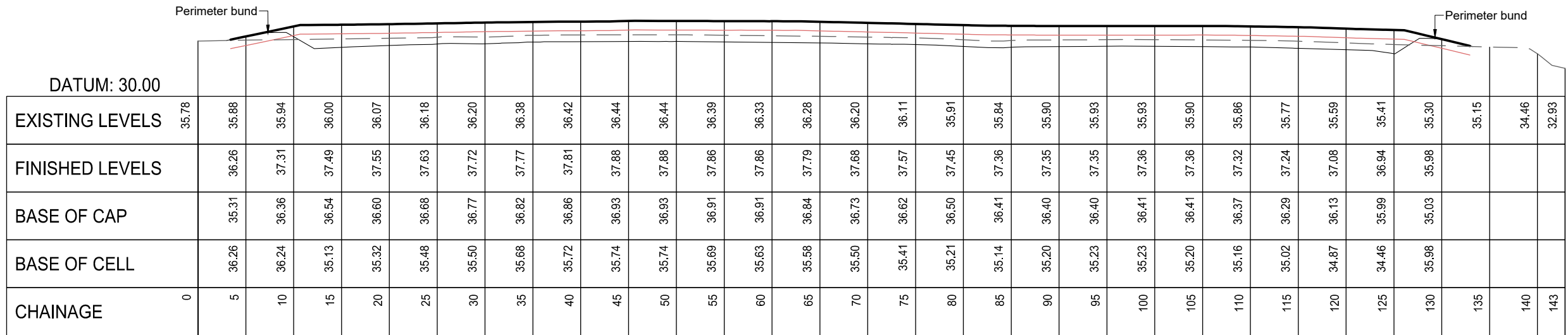
- Existing Ground
— Finished Ground
— Proposed Cap
— Proposed Cell Base



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



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



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

NOT FOR CONSTRUCTION

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REVISION	CHANGES		CHECKED	DATE
A	STH LF TOE BUND ADDED		SF	20/11/24
B	COORDINATE SYSTEM CHANGED		SF	23/05/25

NOTES

PROJECT DATUMS:
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COORDINATE: New Zealand Transverse Mercator

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INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE
PROPOSED SOUTHERN
DISPOSAL SITE CELL
CROSS SECTIONS SHEET 1

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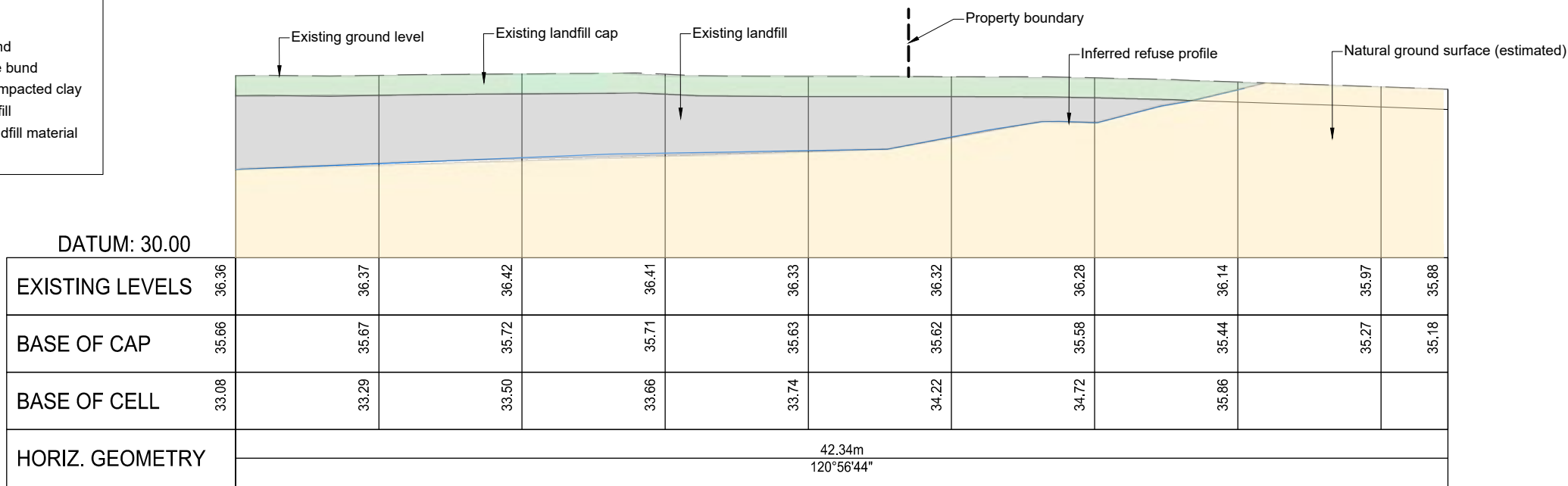
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STATUS
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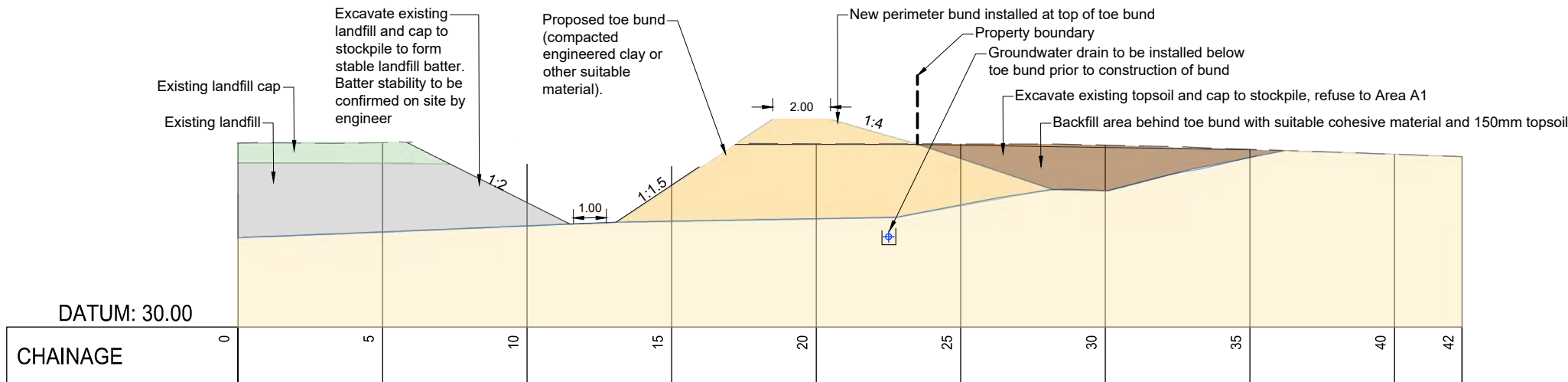
SCALE 1:500 (A3)
DRAWING No 33097/LF230
REVISION B

Legend

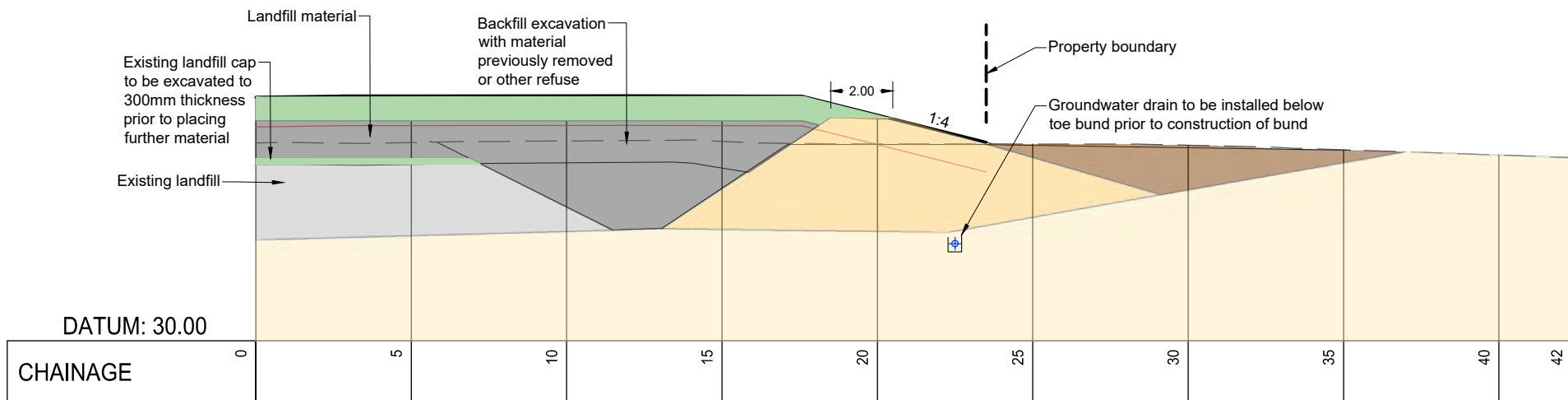
- Natural ground
- Proposed toe bund
- Proposed compacted clay
- Existing landfill
- Proposed landfill material
- Landfill cap



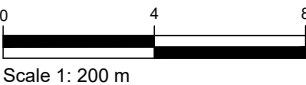
2-4 Cross Section 2-4 - Existing
221 1:200



2-4 Cross Section 2-4 - Stage 1
221 1:200



2-4 Cross Section 2-4 - Stage 2
221 1:200



NOT FOR CONSTRUCTION

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

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

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TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

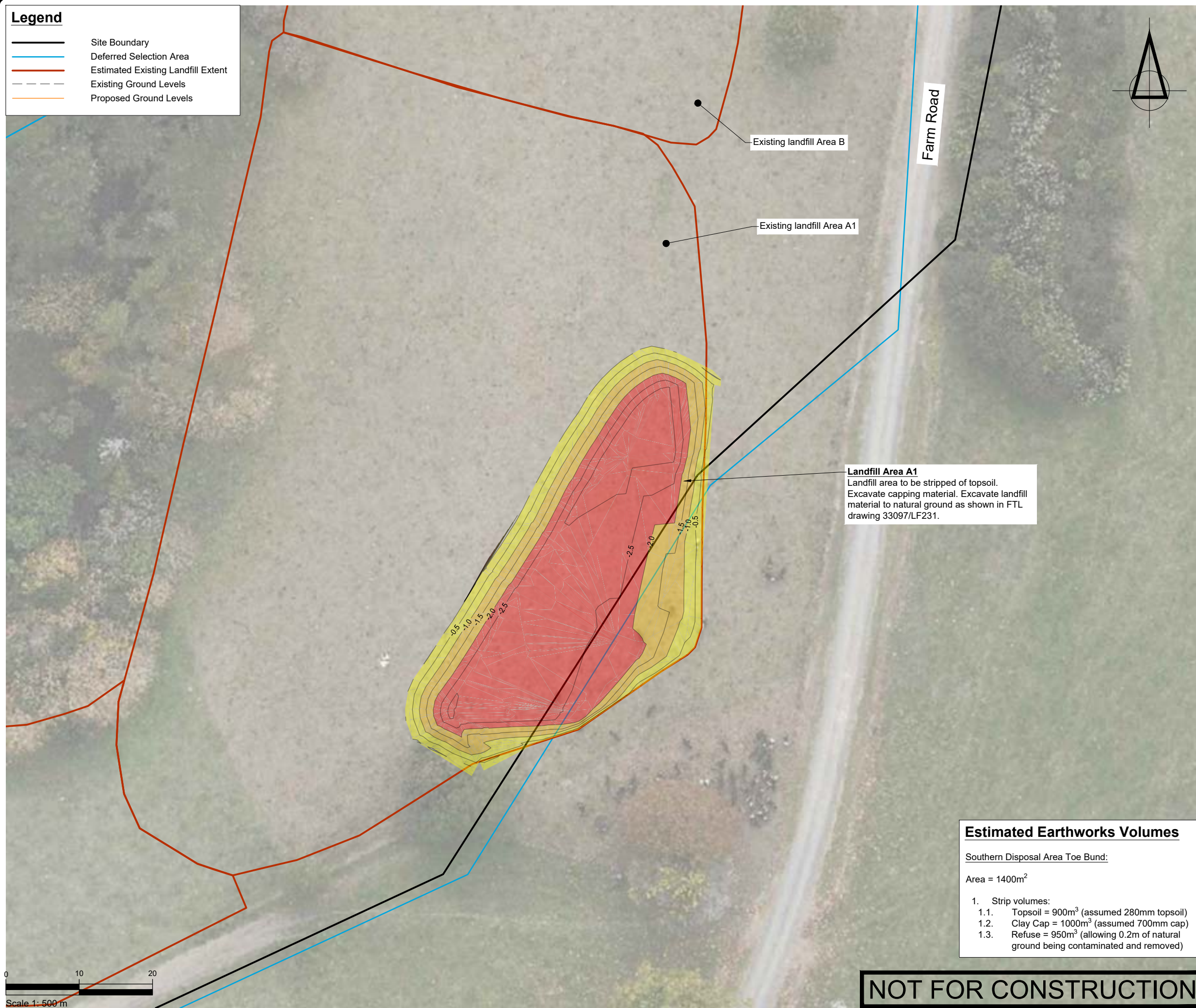
PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE
PROPOSED SOUTHERN
DISPOSAL SITE CELL
CROSS SECTIONS SHEET 2

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NOTES

PROJECT DATUMS:
 LEVEL: New Zealand Vertical Datum 2016
 COORDINATE: New Zealand Transverse Mercator

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TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

PROPOSED SOUTHERN
DISPOSAL SITE CELL
REFUSE EXCAVATION PLAN

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)
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		A

Legend

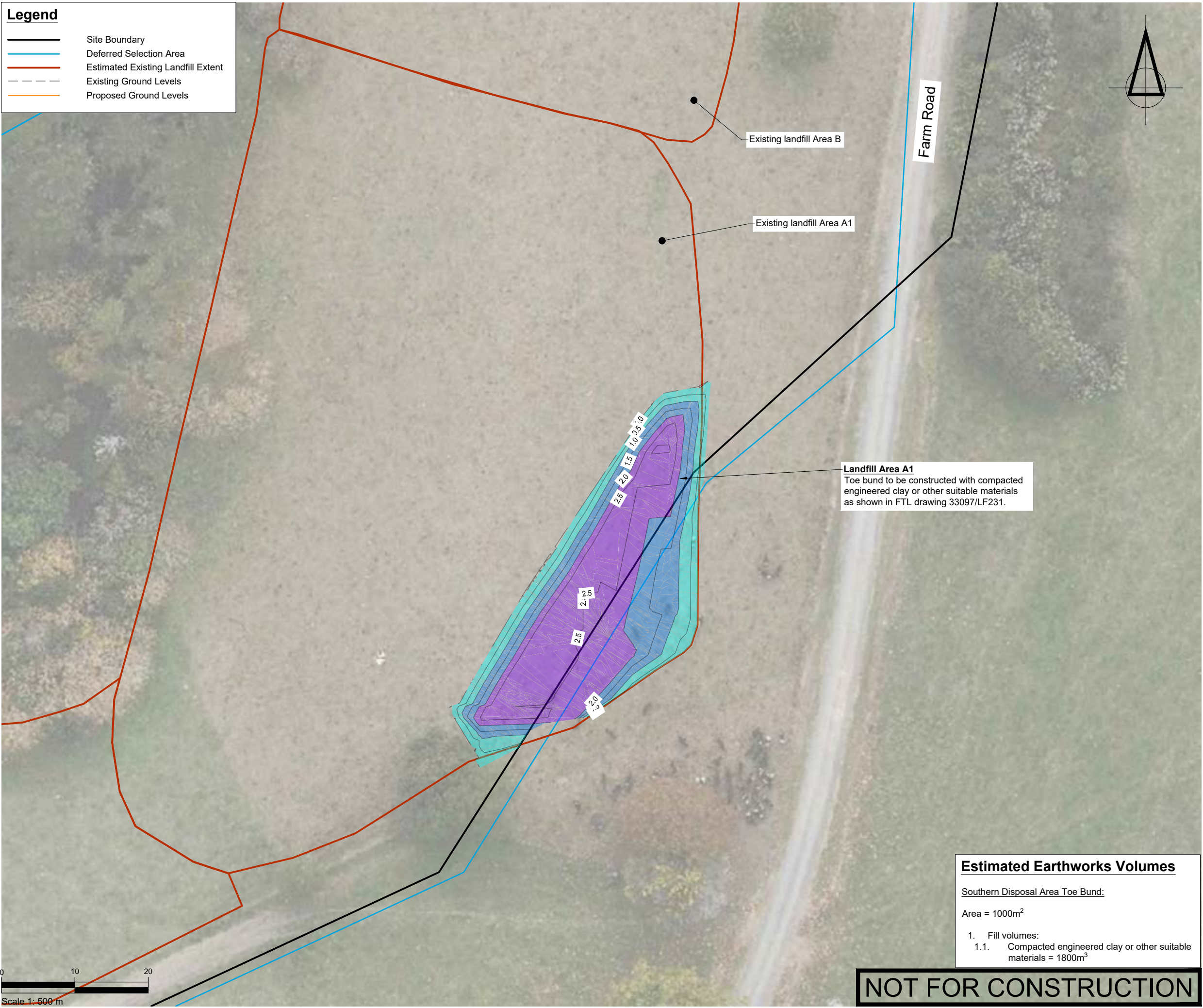
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

Proposed Ground Levels



SURVEYED			APPROVED SF 21/11/24	DATE	
DESIGNED	TB	20/11/24			
DRAWN	TB	20/11/24			
CHECKED	SF	21/11/24			
REVISION	CHANGES			CHECKED	DATE
A	COORDINATE SYSTEM CHANGED			SF	23/05/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
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
TOE BUND CONSTRUCTION
PLAN

Fraser
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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

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SCALE	1:500	(A3)
DRAWING No	33097/LF239	REVISION
		A

Estimated Earthworks Volumes

Southern Disposal Area Toe Bund:

Area = 1000m²

1. Fill volumes:
- 1.1. Compacted engineered clay or other suitable materials = 1800m³

NOT FOR CONSTRUCTION

Legend

Site Boundary

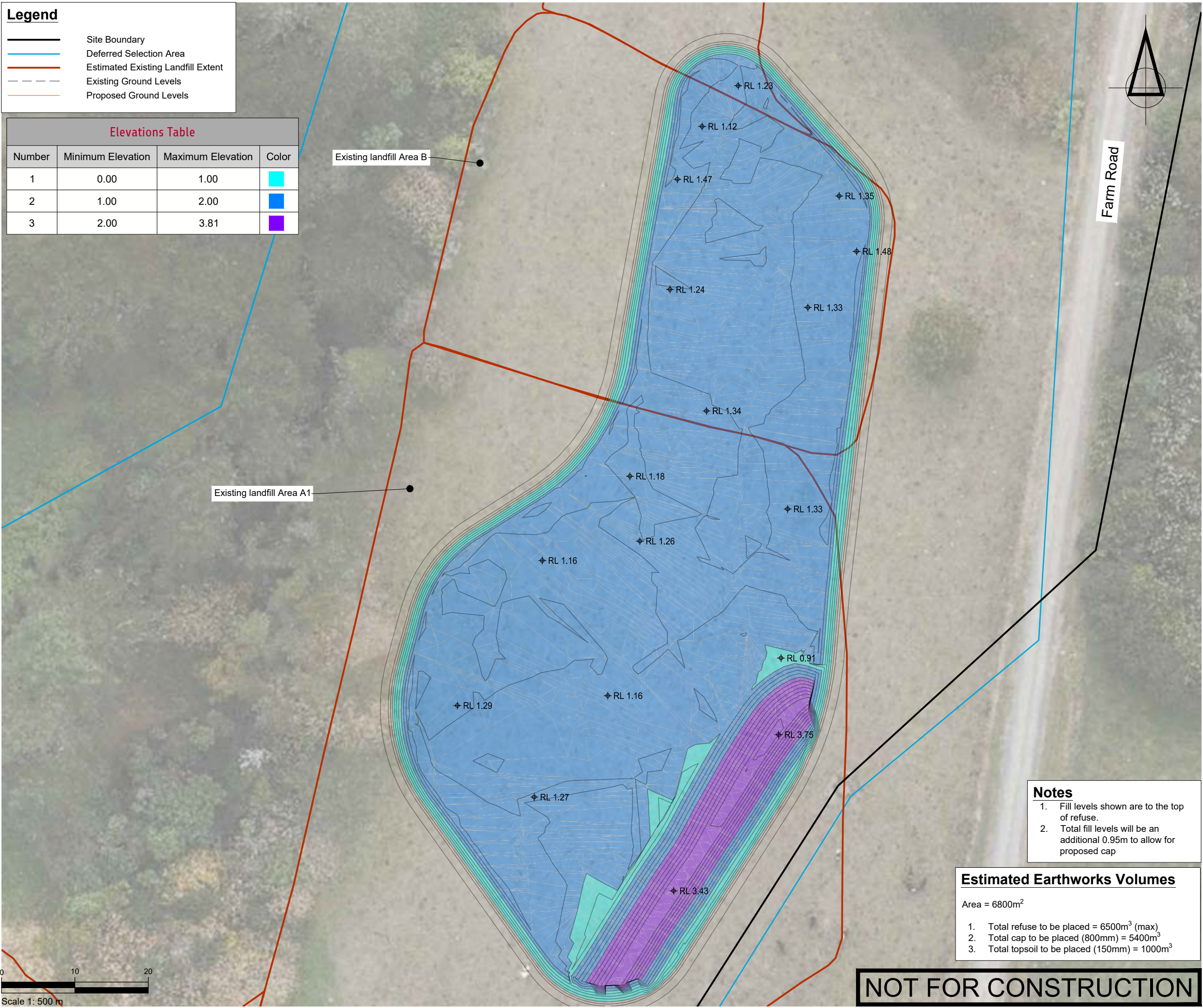
Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

Proposed Ground Levels

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	0.00	1.00	
2	1.00	2.00	
3	2.00	3.81	



- Notes
1.

Fill levels shown are to the top of refuse.
2.

Total fill levels will be an additional 0.95m to allow for proposed cap

Estimated Earthworks Volumes	
Area = 6800m ²	
1.	Total refuse to be placed = 6500m ³ (max)
2.	Total cap to be placed (800mm) = 5400m ³
3.	Total topsoil to be placed (150mm) = 1000m ³

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SURVEYED			APPROVED SF 05/11/24	DATE	
DESIGNED	TB	14/08/24			
DRAWN	TB	21/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	STH LF TOE BUND ADDED			SF	20/11/24
B	COORDINATE SYSTEM CHANGED			SF	23/05/25

NOTES

PROJECT DATUMS:

LEVEL: New Zealand Vertical Datum 2016

COORDINATE: New Zealand Transverse Mercator

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TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT

FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

PROPOSED SOUTHERN
DISPOSAL SITE CELL
REFUSE FILLING PLAN

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HAWKE'S BAY

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SCALE

1:500

(A3)

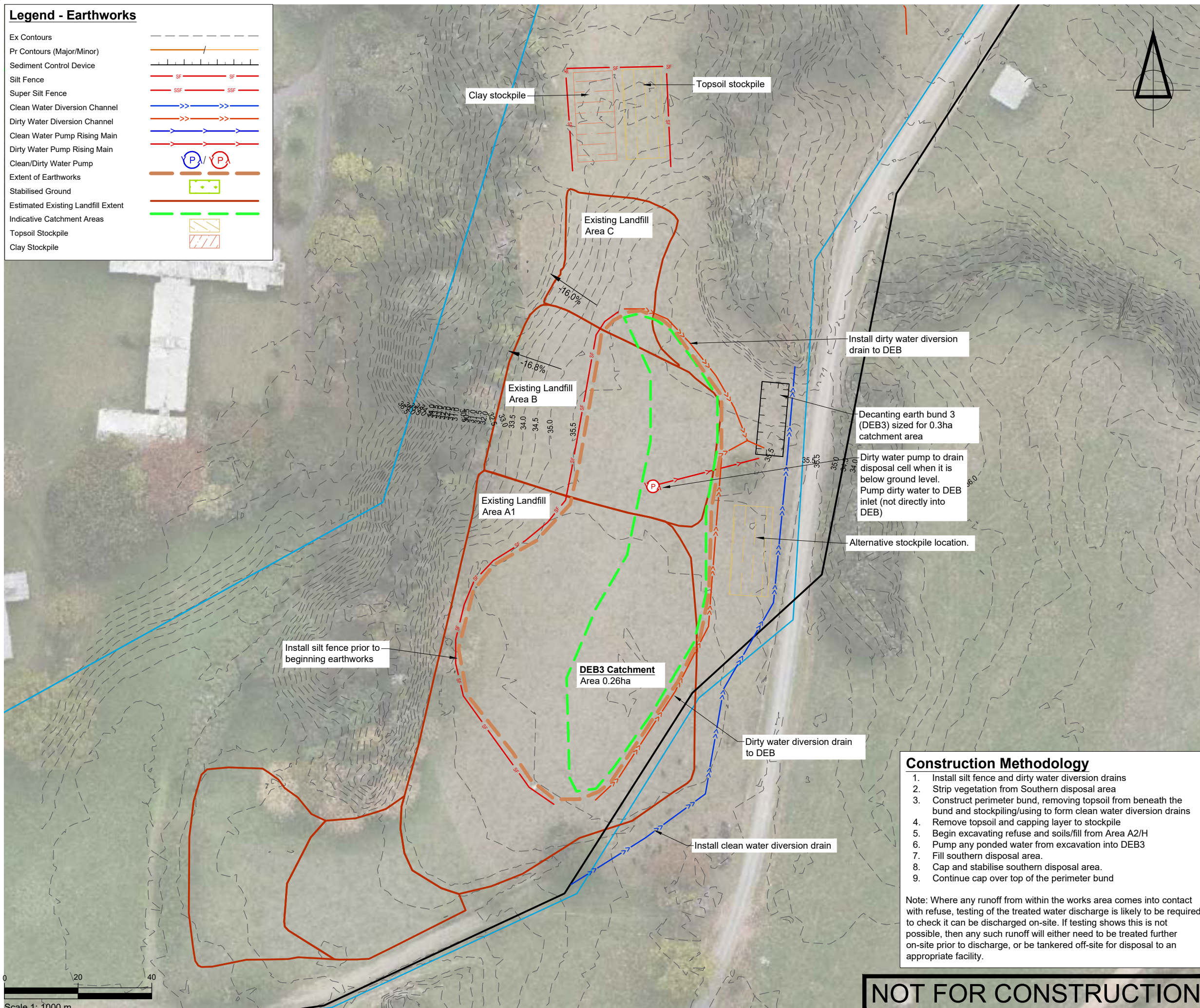
DRAWING No

33097/LF241

REVISION

B

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: New Zealand Vertical Datum 2016

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

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/LF290 REVISION B

Legend

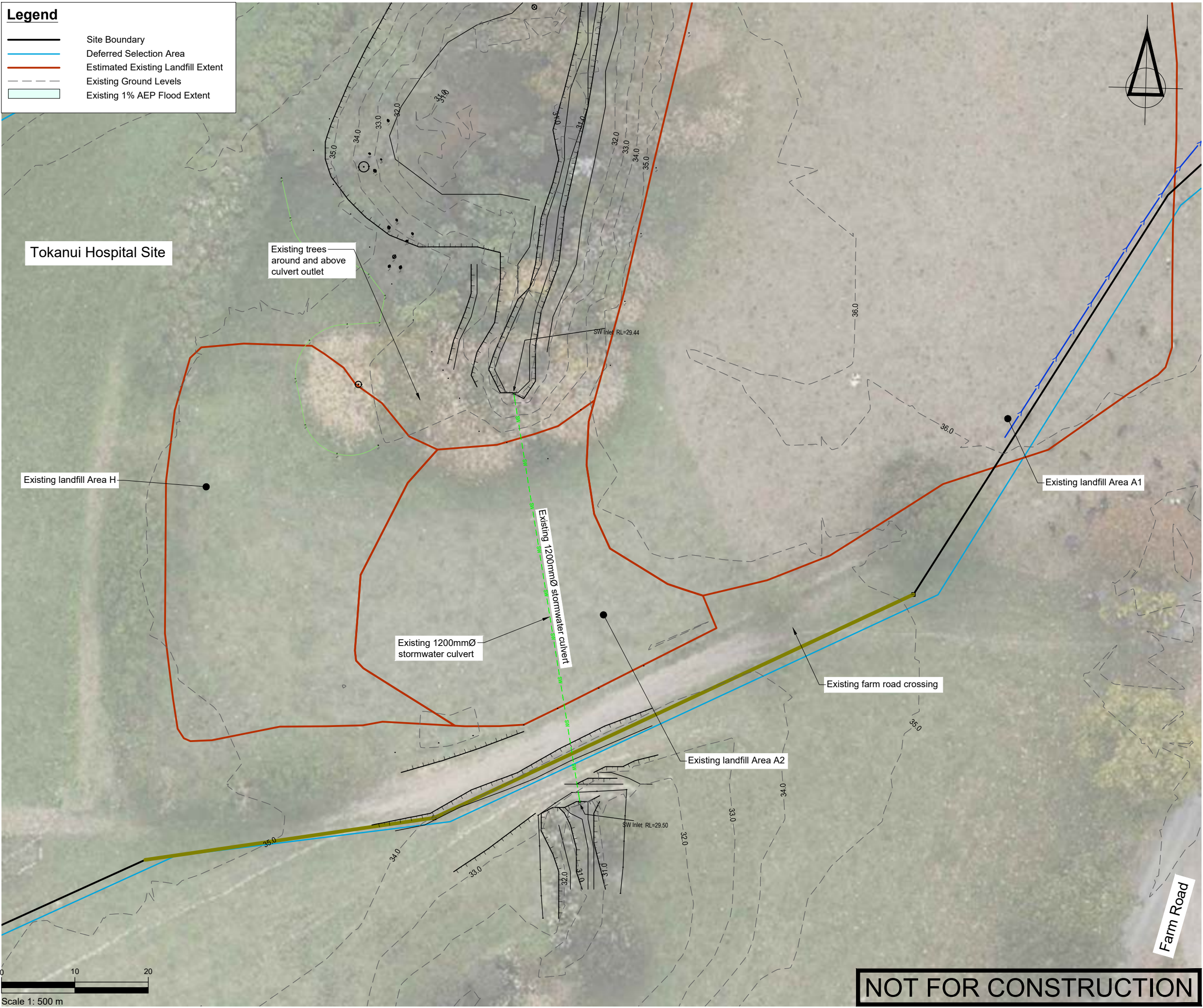
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

Existing 1% AEP Flood Extent



SURVEYED			APPROVED SF 05/11/24	DATE	
DESIGNED	TB	14/08/24			
DRAWN	TB	15/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	AREA A2/H REDESIGN			SF	23/05/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
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
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SCALE 1:500 (A3)

DRAWING No 33097/LF300 REVISION A

NOT FOR CONSTRUCTION

	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

Existing landfill Area H—



100

Culvert 3 Remedial works

Strip topsoil, landfill cap and any soils/fill material. Excavate all refuse from area, disposing of the refuse into the southern disposal site. Undercut the natural ground if required, and then form the proposed stream and farm crossing. Topsoil and stabilise the area. Riparian planting along the stream.

New 1350mmØ stormwater —
culvert see FTL Drawing
33097/LF360 for long section.
Base of culvert to be
embedded 340mm into the
ground to provide for fish
passage.

Form new toe bund for existing landfill Area A1

- Stream base to have meanders and will be planted with natives with rock/logs located throughout.

- Rear face of toe bund to be backfilled with refuse material and then capped, topsoiled and grassed

—Existing landfill Area A1

— Farm track to be lifted to detain flood waters to existing levels

Existing landfill Area A2

NOT FOR CONSTRUCTION

[illegible]

NOTES

PROJECT DATUMS:

LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

CLIENT

TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT

PROJECT

FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

AREAS A2/H & CULVERT 3
PROPOSED FINAL DESIGN PLAN



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SCALE 1:500 (A3)

1.500		(15)
DRAWING No		REVISION

33097/LF310 D

P:\33 series\33097\03 Drawings\33097-LF311.dwg, 20/8/2025 4:01 pm

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 = 0.50ha

Existing Landfill Area H

Existing Landfill Area A1

Existing culvert (to be fully grouted and plugged)

Existing Landfill Area A2

Proposed culvert

Notes

1. 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.
2. 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 SF 05/11/24	DATE	
DESIGNED	TB	14/08/24			
DRAWN	TB	15/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	AREA A2/H REDESIGN			SF	23/05/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

INDICATIVE VEGETATION
REMOVAL PLAN

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STATUS

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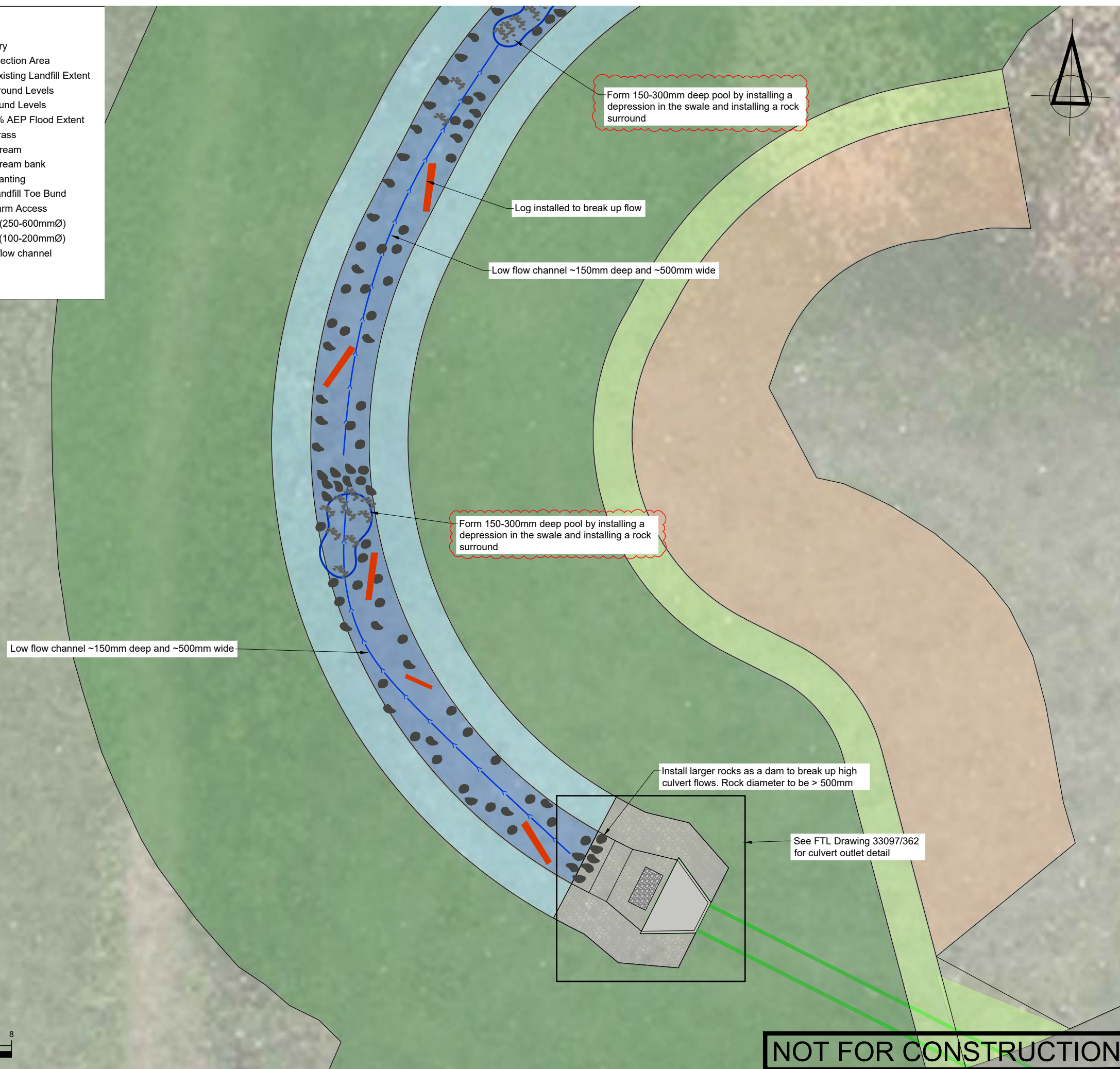
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE 1:500 (A3)

DRAWING No 33097/LF311

REVISION A

	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
	Large rocks (250-600mmØ)
	Small rocks (100-200mmØ)
	Stream low flow channel
	Water pool
	Log

[illegible][illegible]

TOITU TE WHENUA LAND INFORMATION NEW ZEALAND

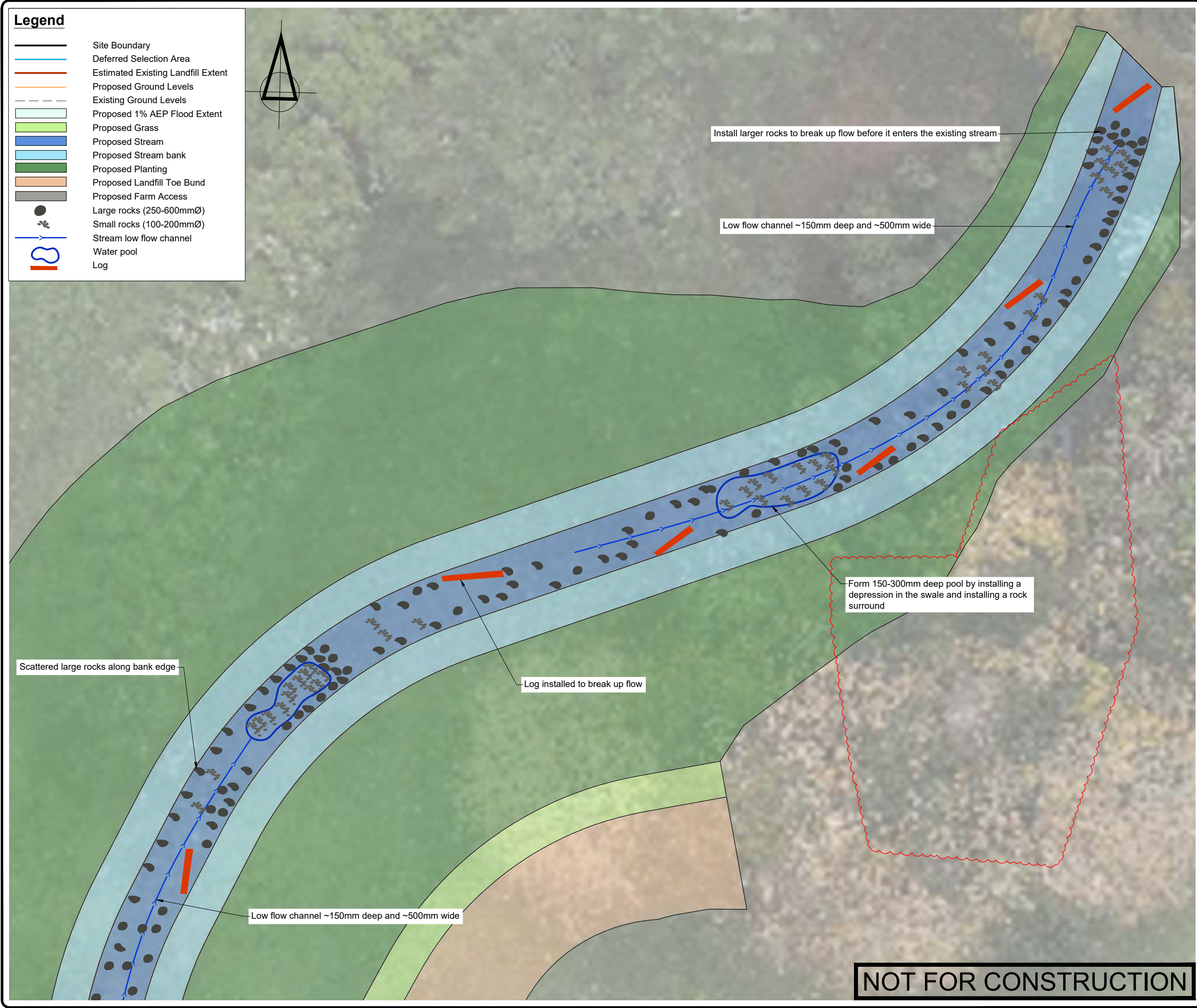
PROJECT FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

INDICATIVE STREAM
CONSTRUCTION PLAN 1

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		(A3)
DRAWING No	33097/LF312		REVISION A

P:\33 series\33097\03 Drawings\33097-LF312-313.dwg, tbohes, 20/8/2025 4:01 pm



SURVEYED			APPROVED SF 19/06/25	DATE	
DESIGNED	TB	19/06/25			
DRAWN	TB	19/06/25			
CHECKED	SF	19/06/25			
REVISION	CHANGES			CHECKED	DATE
A	CULVERT 3 OUTLET CHANGE			SF	20/08/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

CLIENT
TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE
INDICATIVE STREAM
CONSTRUCTION PLAN 2

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SCALE 1:200 (A3)

DRAWING No 33097/LF313 REVISION A

Legend

Site Boundary

Deferred Selection Area

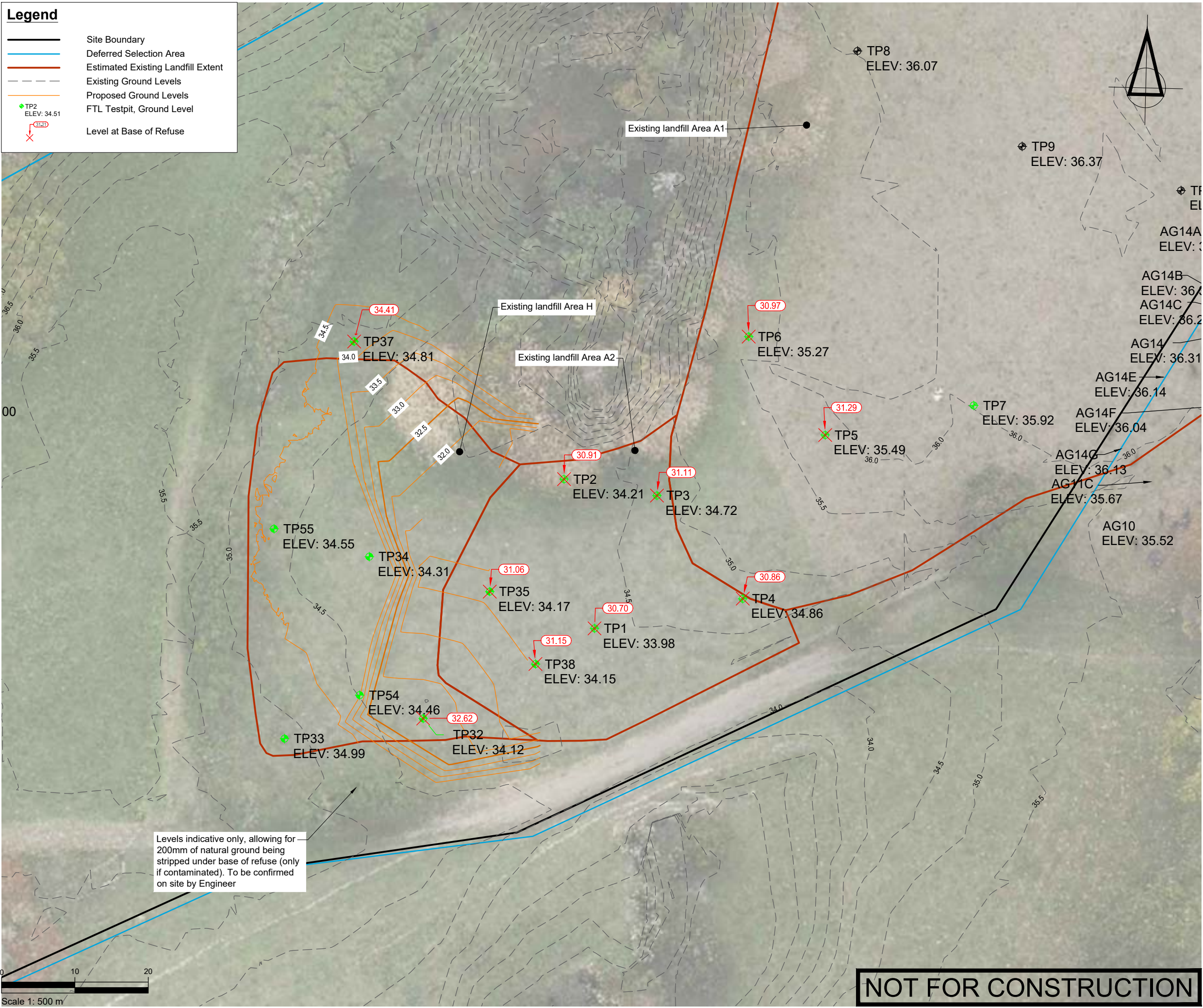
Estimated Existing Landfill Extent

Existing Ground Levels

Proposed Ground Levels

FTL Testpit, Ground Level

Level at Base of Refuse



SURVEYED			APPROVED SF 05/11/24	DATE	
DESIGNED	TB	14/08/24			
DRAWN	TB	21/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	AREA A2/H REDESIGN			SF	23/05/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
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
REFUSE UNDERCUT PLAN

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STATUS

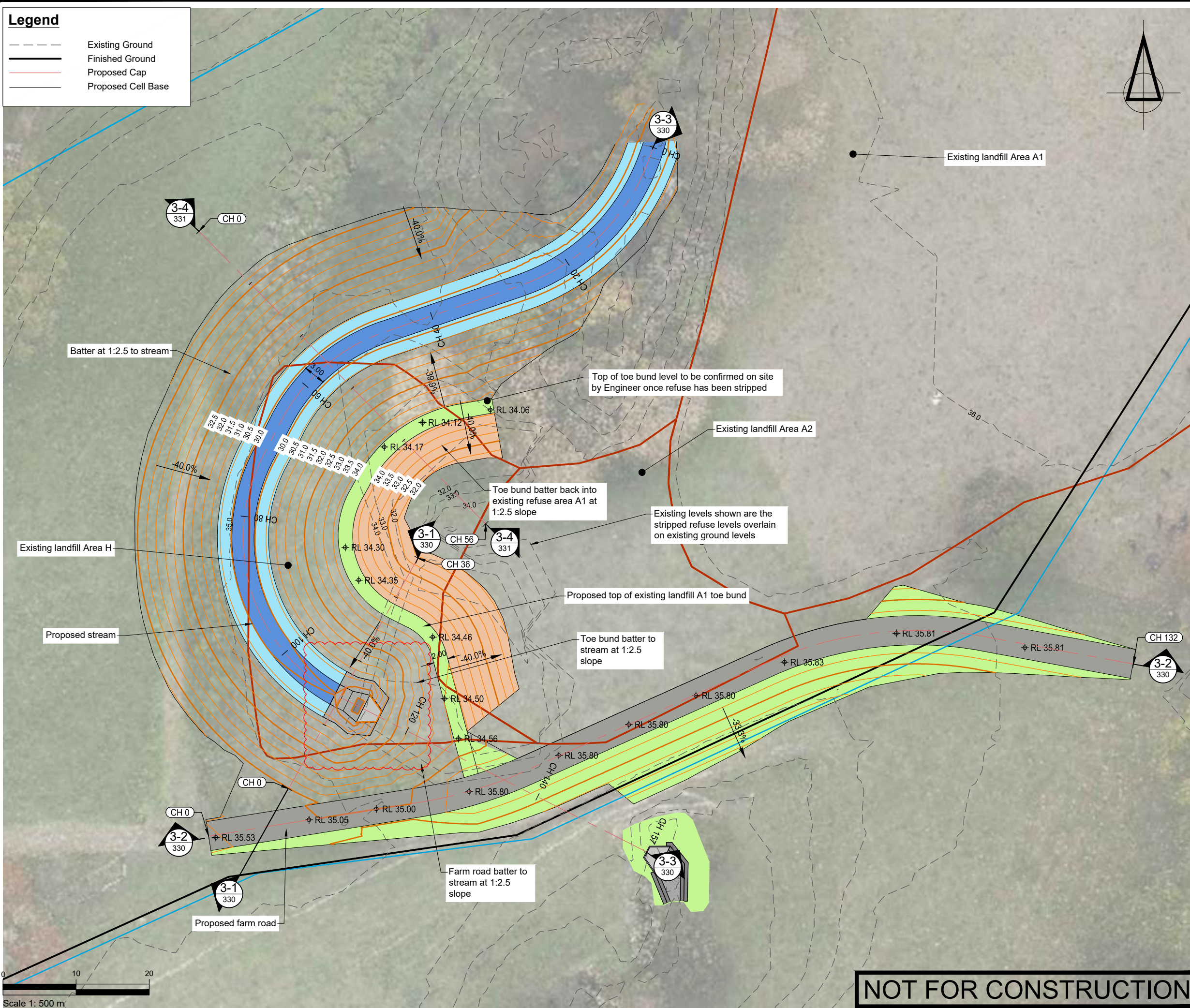
FOR RESOURCE CONSENT

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with the Council or Council organisation stamped approved drawings,
unless otherwise indicated.

SCALE 1:500 (A3)

DRAWING No 33097/LF320 REVISION A

 Existing Ground
 Finished Ground
 Proposed Cap
 Proposed Cell Base

[illegible]

NOTES

PROJECT DATUMS:
 LEVEL: New Zealand Vertical Datum 2016
 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
FINISHED LEVELS PLAN



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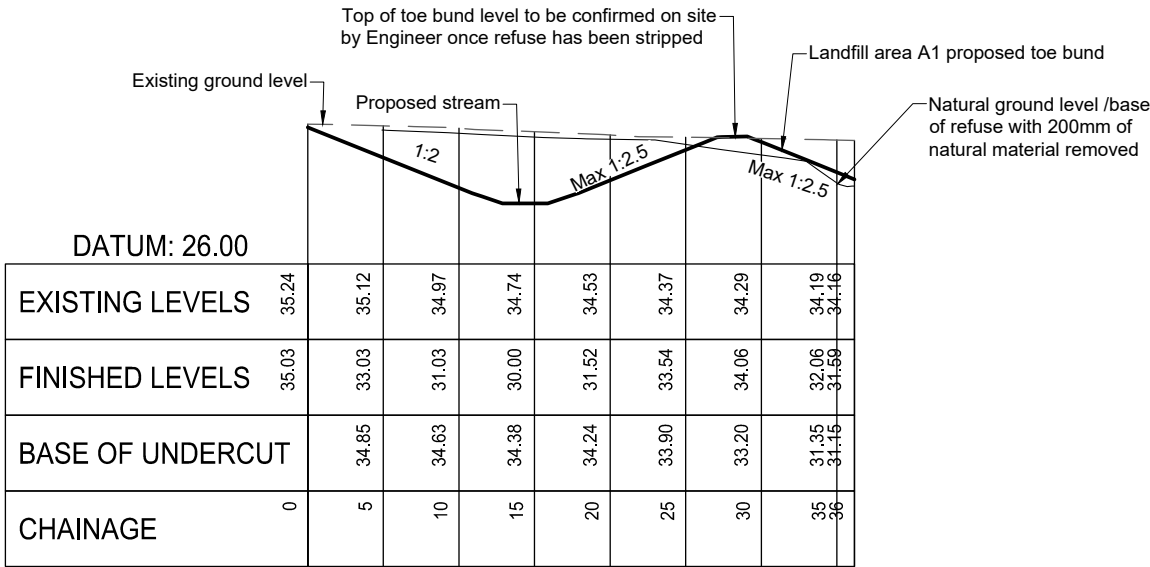
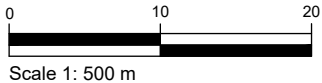
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE 1:500 (A3)

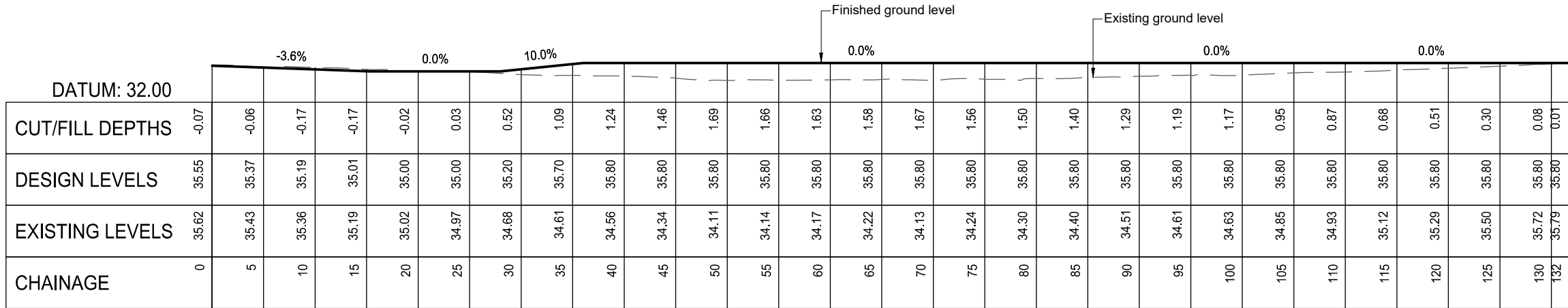
DRAWING No. 33097/LE321 REVISION B

NOT FOR CONSTRUCTION

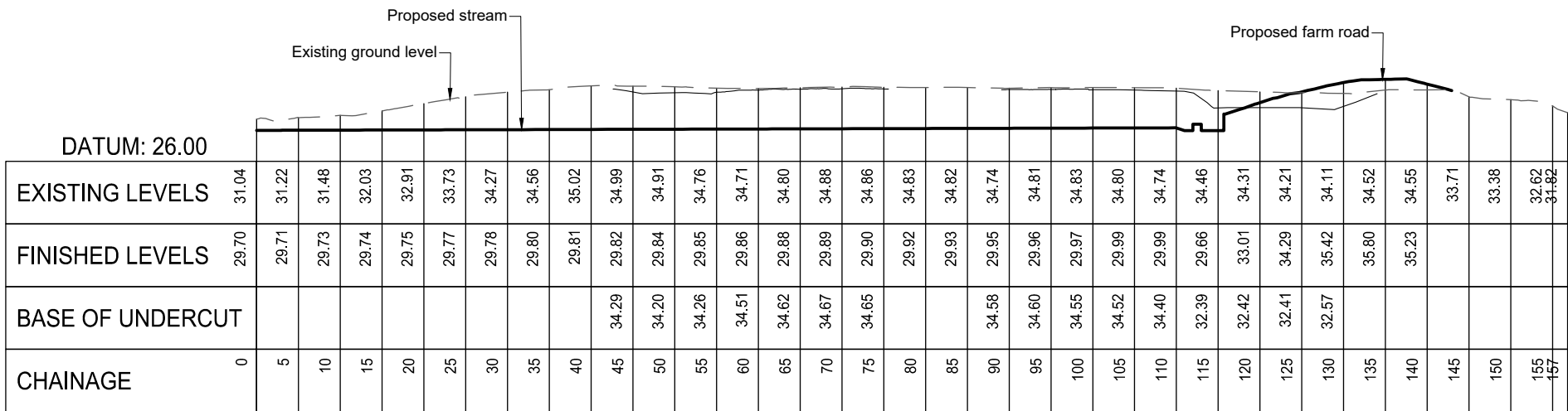
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3-1 Cross Section 3-1
321 1:500



3-2 Cross Section 3-2
321 1:500



3-3 Cross Section 3-3
321 1:750

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DESIGNED	TB	14/08/24			
DRAWN	TB	21/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	AREA A2/H REDESIGN			SF	23/05/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

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TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE
AREAS A2/H & CULVERT 3
CROSS SECTION PLAN 1



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SCALE AS SHOWN (A3)
DRAWING No 33097/LF330
REVISION A

Legend

Natural ground

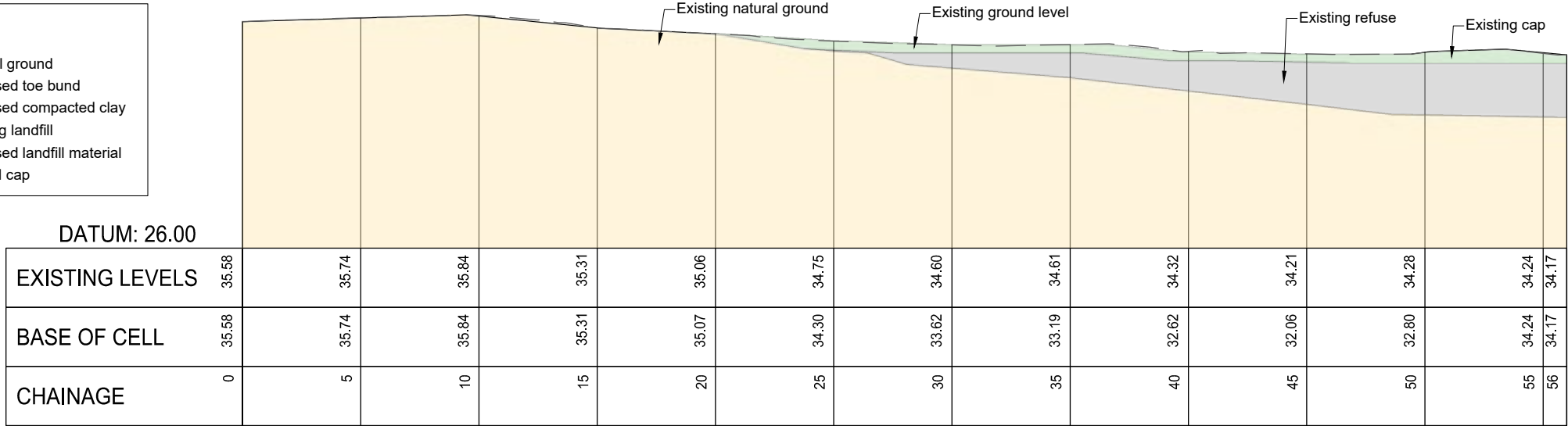
Proposed toe bund

Proposed compacted clay

Existing landfill

Proposed landfill material

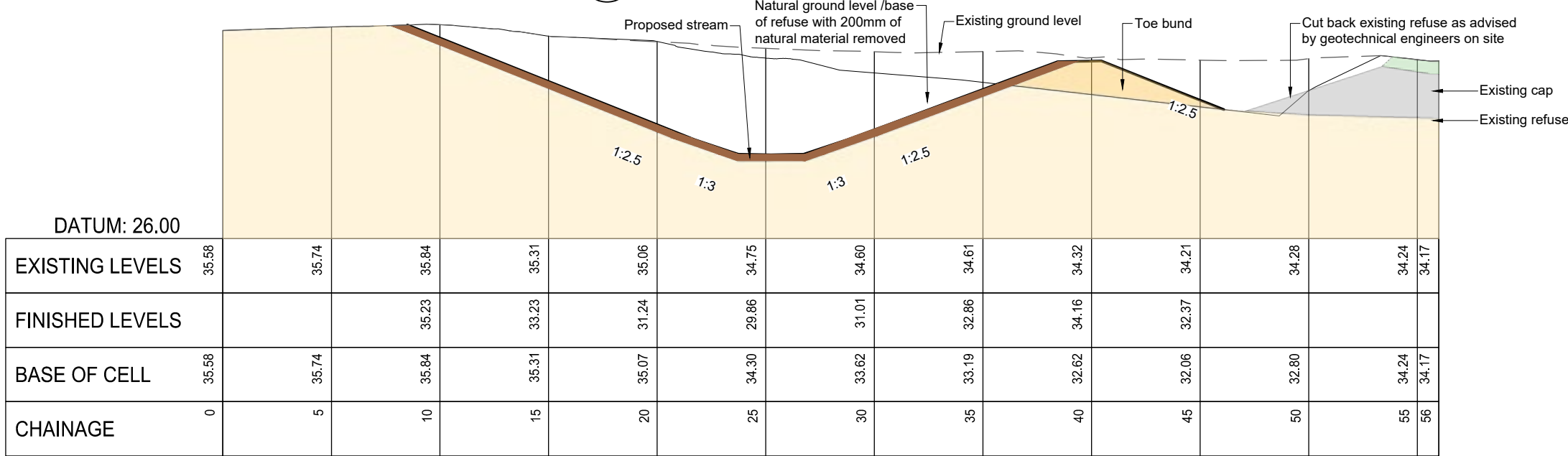
Landfill cap



3-4 Cross Section 3-4 - Existing

321

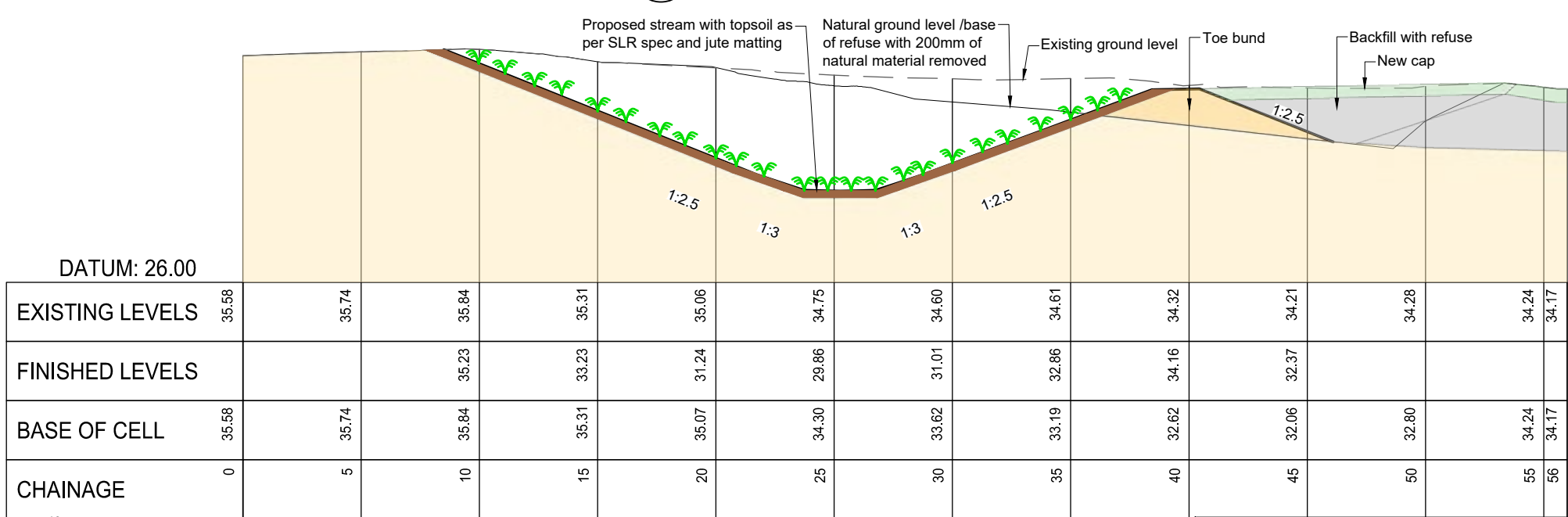
1:250



3-4 Cross Section 3-4 - Existing

321

1:250



3-4 Cross Section 3-4 - Existing

321

1:250

NOT FOR CONSTRUCTION

SURVEYED			APPROVED	DATE
DESIGNED	TB	20/11/24	SF	
DRAWN	TB	23/05/25	23/05/25	
CHECKED	SF	23/05/25		
REVISION	CHANGES		CHECKED	DATE
A	AREA A2/H REDESIGN		SF	23/05/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

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TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT

FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

AREAS A2/H & CULVERT 3
CROSS SECTION PLAN 2

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STATUS

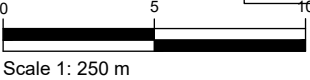
FOR RESOURCE CONSENT

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SCALE 1:250 (A3)

DRAWING No 33097/LF331

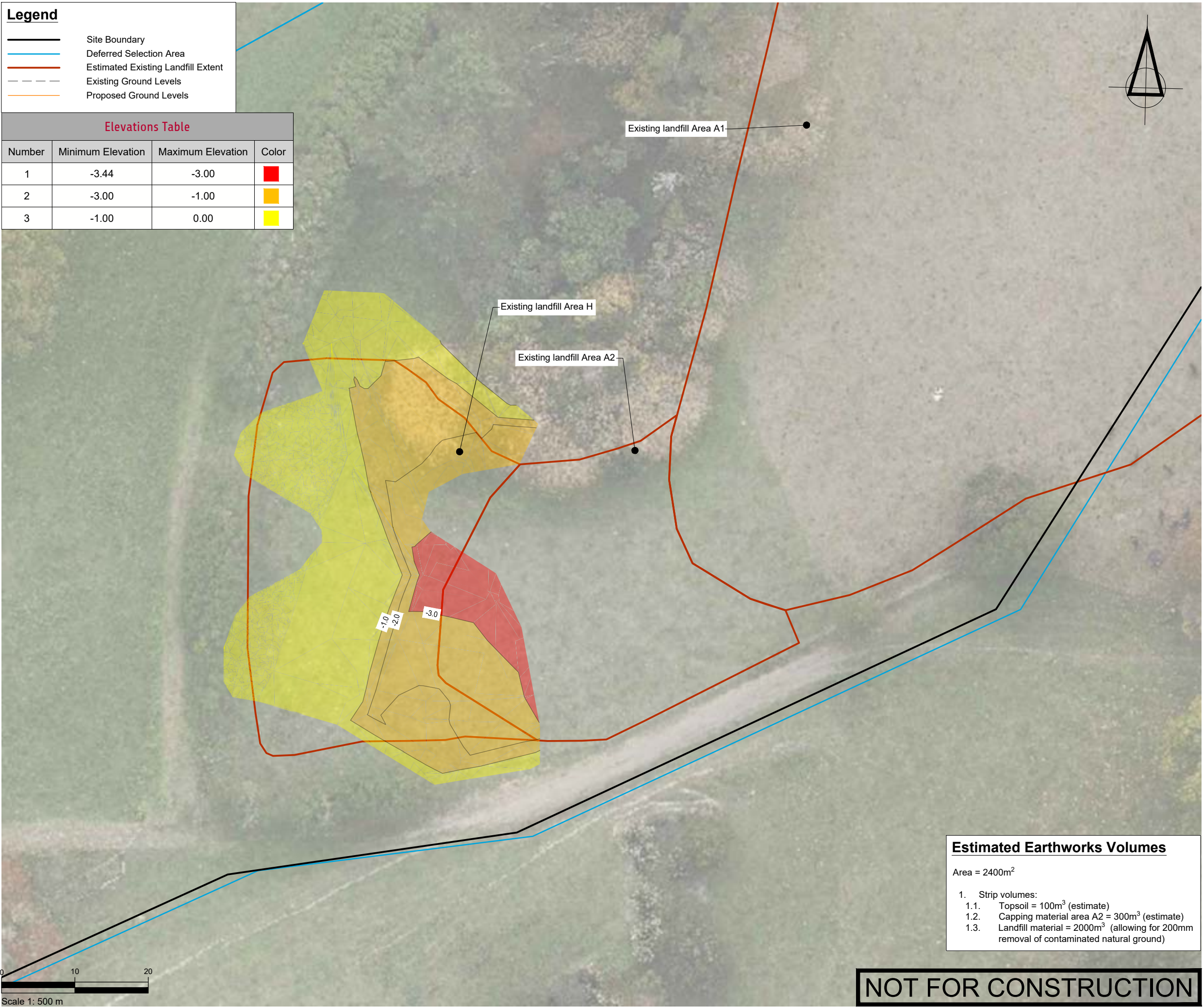
REVISION A



Legend

- Site Boundary
- Deferred Selection Area
- Estimated Existing Landfill Extent
- Existing Ground Levels
- Proposed Ground Levels

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-3.44	-3.00	
2	-3.00	-1.00	
3	-1.00	0.00	



Estimated Earthworks Volumes

Area = 2400m²

1. Strip volumes:

- 1.1. Topsoil = 100m³ (estimate)
- 1.2. Capping material area A2 = 300m³ (estimate)
- 1.3. Landfill material = 2000m³ (allowing for 200mm removal of contaminated natural ground)

NOT FOR CONSTRUCTION

SURVEYED			APPROVED SF 05/11/24	DATE	
DESIGNED	TB	14/08/24			
DRAWN	TB	21/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	AREA A2/H REDESIGN			SF	23/05/25

NOTES

PROJECT DATUMS:
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INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE
AREAS A2/H & CULVERT 3
UNDERCUT STRIP PLAN



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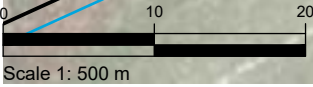
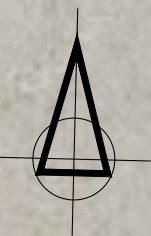
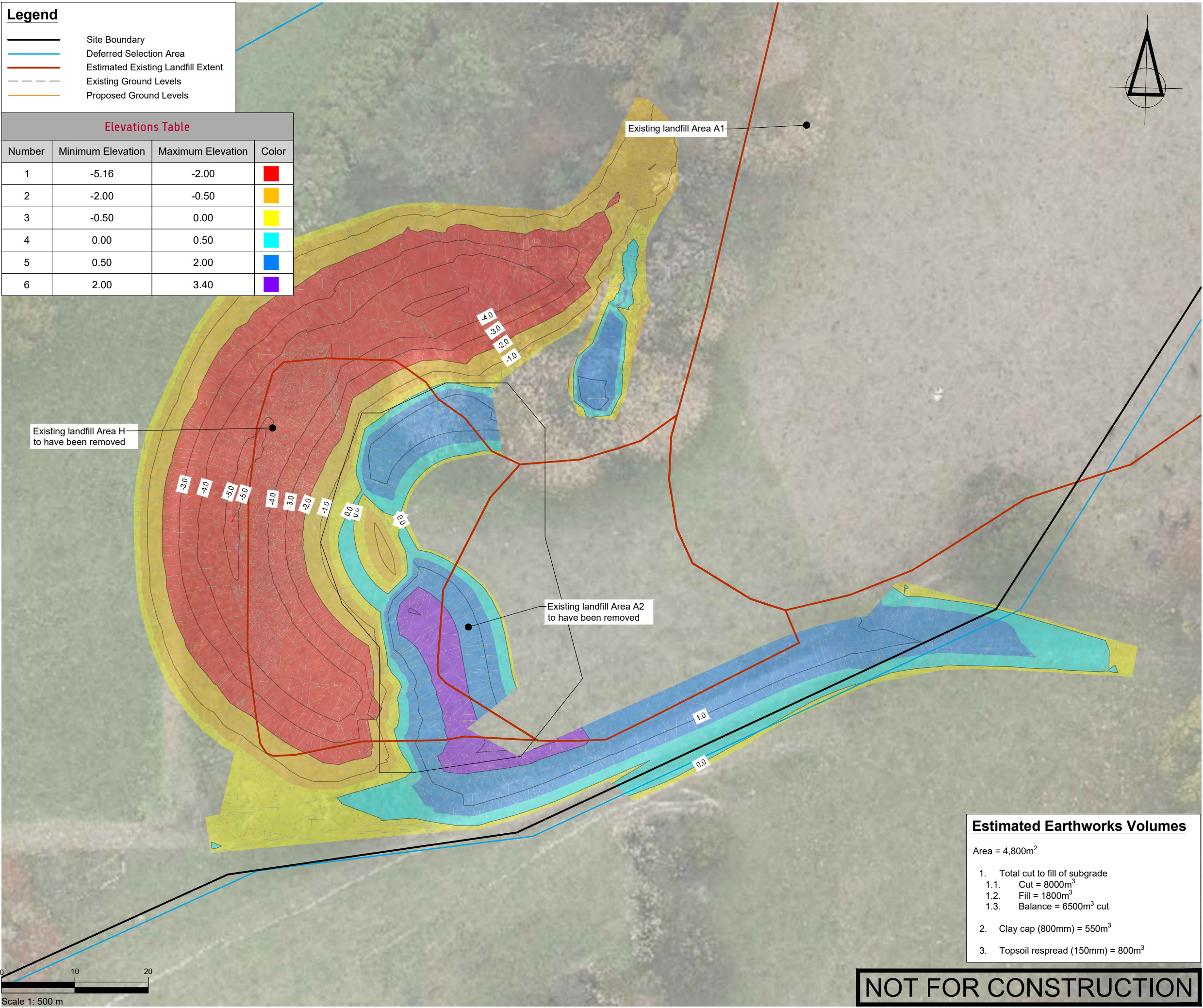
STATUS
FOR RESOURCE CONSENT
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE	1:500	(A3)
DRAWING No	33097/LF340	REVISION
		A

Legend

- Site Boundary
- Deferred Selection Area
- Estimated Existing Landfill Extent
- Existing Ground Levels
- Proposed Ground Levels

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-5.16	-2.00	
2	-2.00	-0.50	
3	-0.50	0.00	
4	0.00	0.50	
5	0.50	2.00	
6	2.00	3.40	



Estimated Earthworks Volumes

Area = 4,800m²

- Total cut to fill of subgrade
 - Cut = 8000m³
 - Fill = 1800m³
 - Balance = 6500m³ cut
- Clay cap (800mm) = 550m³
- Topsoil respread (150mm) = 800m³

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SURVEYED			APPROVED SF 05/11/24	DATE	
DESIGNED	TB	14/08/24			
DRAWN	TB	21/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	AREA A2/H REDESIGN			SF	23/05/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
COORDINATE: New Zealand Transverse Mercator

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INFORMATION NEW ZEALAND**

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

TITLE
**AREAS A2/H & CULVERT 3
FINAL LEVELS CUT AND FILL
PLAN**



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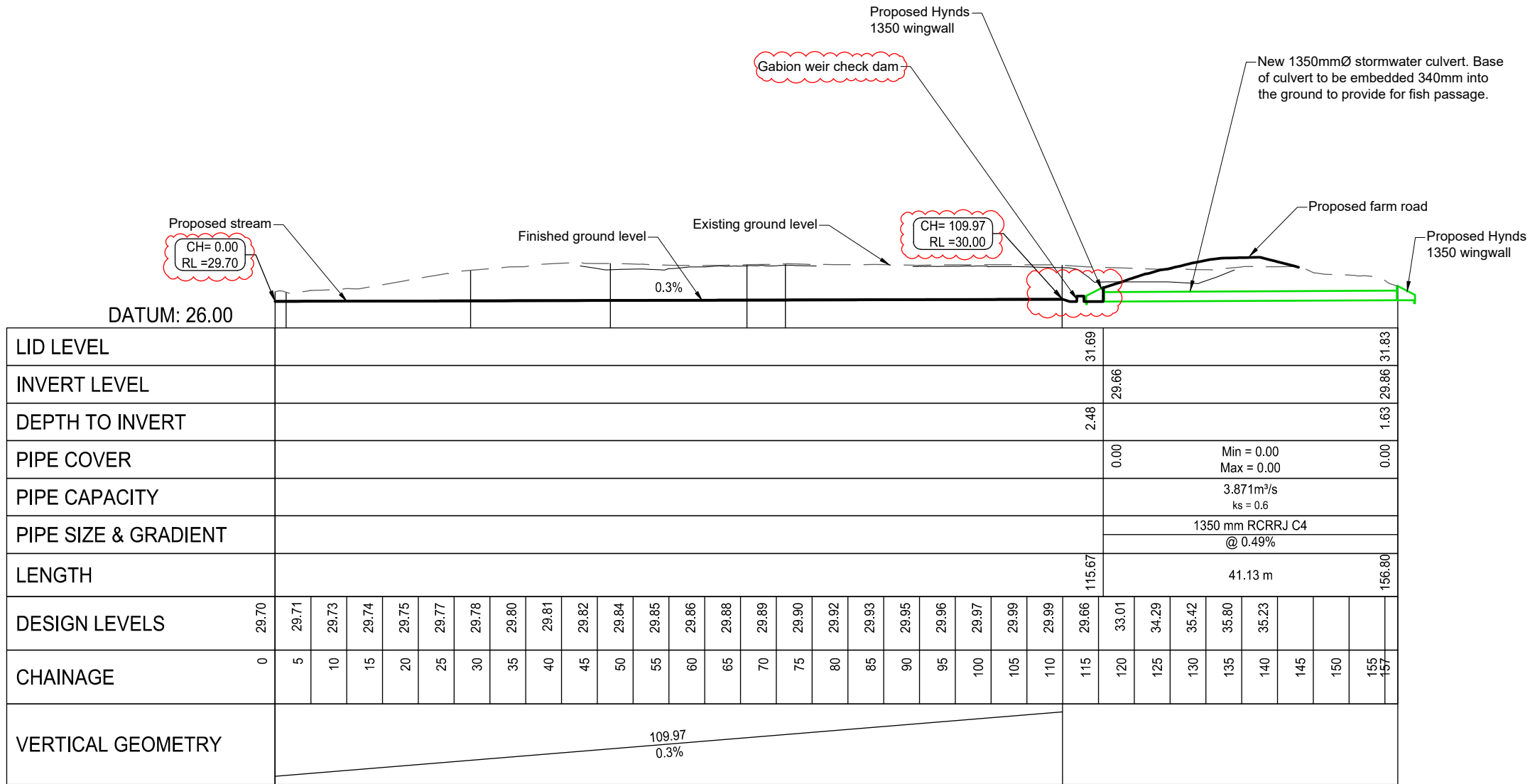
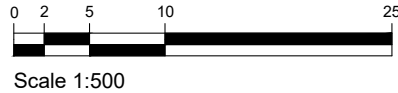
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SCALE	1:500	(A3)
DRAWING No	33097/LF341	REVISION
		A

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L1 Stormwater Long Section 1
360 1:750

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REVISION	CHANGES			CHECKED	DATE
A	ANNOTATION ADDED			SF	08/11/24
B	AREA A2/H REDESIGN			SF	23/05/25
C	UPDATED FISH PASSAGE DETAILS			SF	30/06/25
D	CULVERT 3 OUTLET CHANGE			SF	20/08/25

NOTES

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



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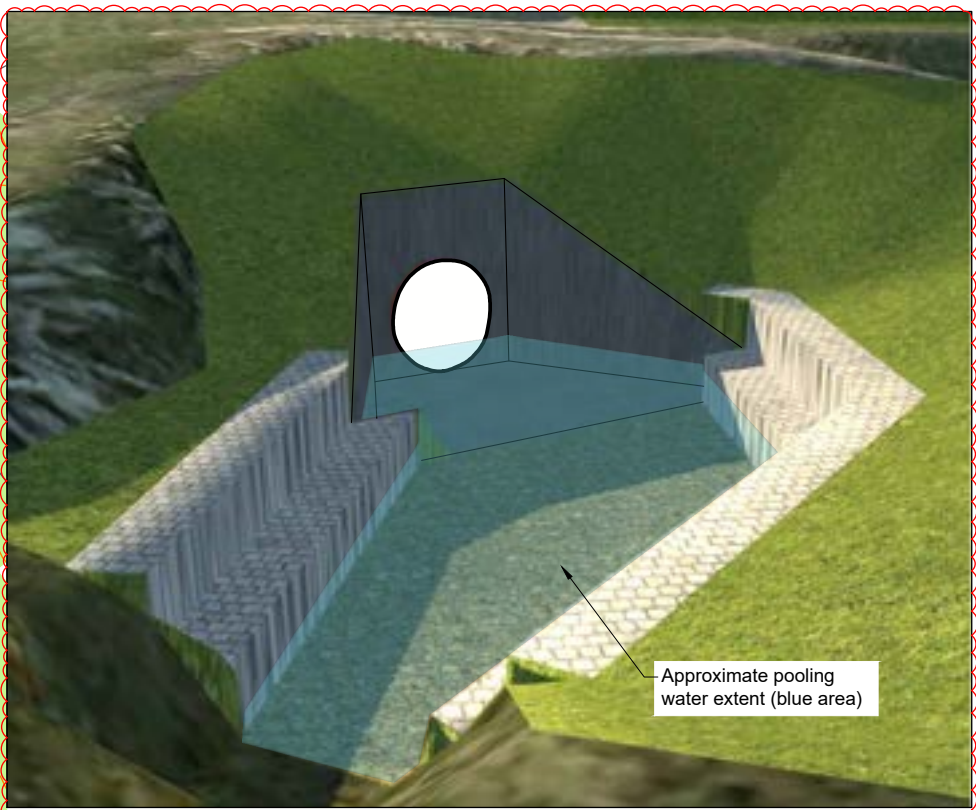
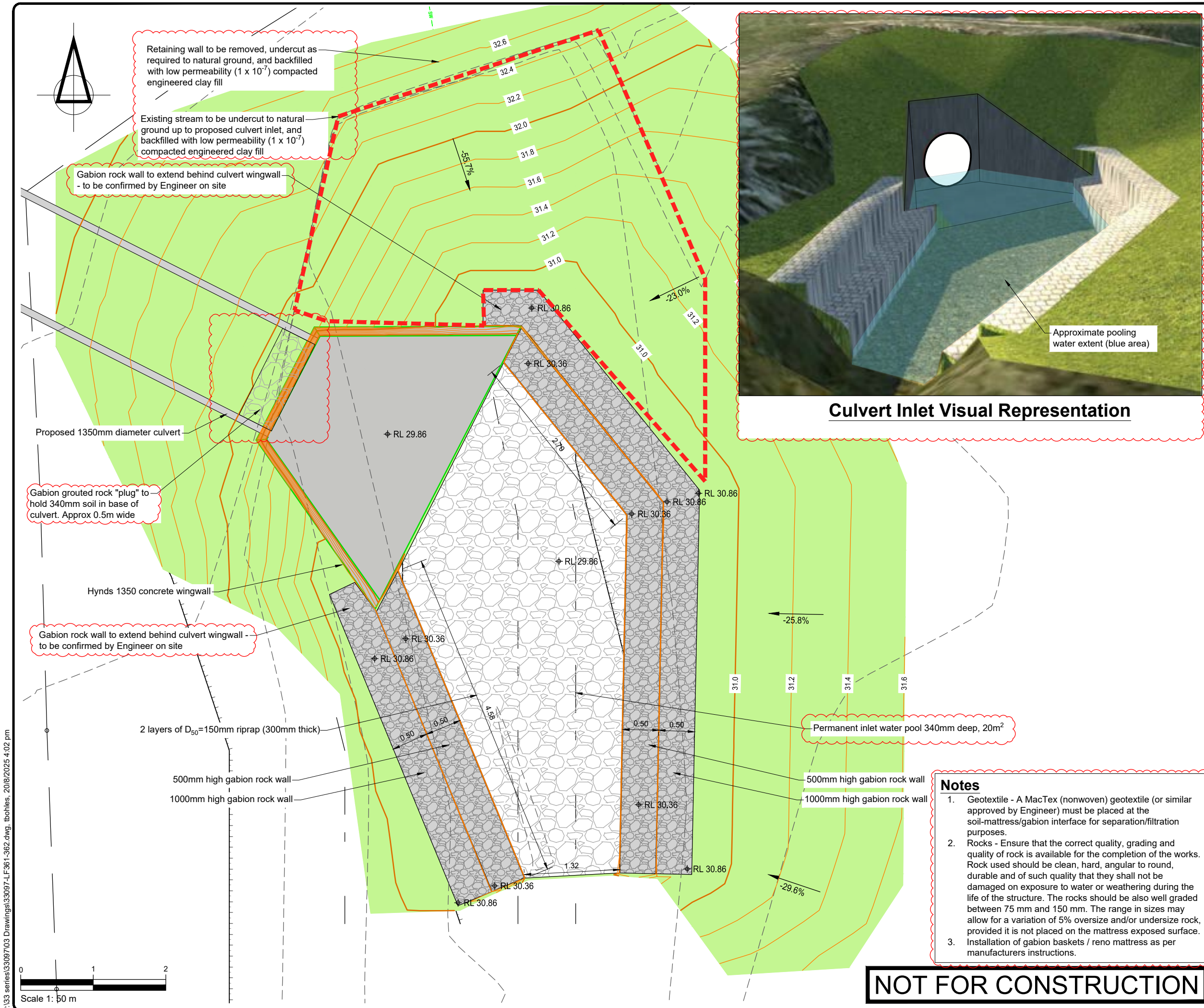
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DRAWING No 33097/LF360 REVISION D



Culvert Inlet Visual Representation

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CHECKED	SF	23/05/25			
REVISION	CHANGES			CHECKED	DATE
A	CULVERT 3 OUTLET CHANGE			SF	20/08/25

NOTES

PROJECT DATUMS:
LEVEL: New Zealand Vertical Datum 2016
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PROJECT

TITLE
AREAS A2/H & CULVERT 3
CULVERT INLET DETAIL



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SCALE 1:50 (A3)
DRAWING No 33097/LF361
REVISION A

- Notes
- Geotextile - A MacTex (nonwoven) geotextile (or similar approved by Engineer) must be placed at the soil-mattress/gabion interface for separation/filtration purposes.
 - Rocks - Ensure that the correct quality, grading and quality of rock is available for the completion of the works. Rock used should be clean, hard, angular to round, durable and of such quality that they shall not be damaged on exposure to water or weathering during the life of the structure. The rocks should be also well graded between 75 mm and 150 mm. The range in sizes may allow for a variation of 5% oversize and/or undersize rock, provided it is not placed on the mattress exposed surface.
 - Installation of gabion baskets / reno mattress as per manufacturers instructions.

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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 or DEB(s) outside 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(s). 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 when constructing new culvert invert.
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 retopsoil, 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 installation of the new shorter culvert 3 (1350 dia x 44m long), 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. Construct a dam in the stream prior to the proposed culvert inlet, and pump water into the existing culvert. 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 fill or similar (~8m3), with both ends of this culvert being sealed. Water within this culvert will be pumped out if necessary, or alternatively expelled naturally during the filling process. Then compact/backfill the area between the existing culvert inlet and new culvert inlet.

- a. Contractor to monitor weather daily. If medium to large rainfall predicted, contractor to install BIDIM cloth from upstream to downstream to allow any flood waters to pass over the earthworks area without uplifting sediment.
- b. 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.
- c. 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.

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NOTES

PROJECT DATUMS:
 LEVEL: New Zealand Vertical Datum 2016
 COORDINATE: New Zealand Transverse Mercator

CLIENT

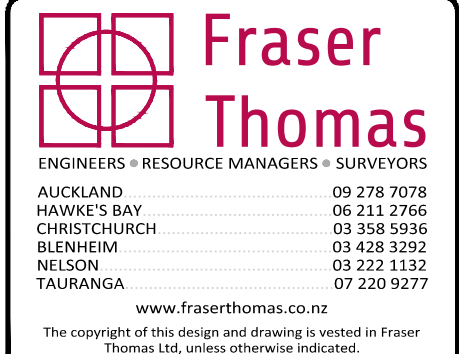
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INFORMATION NEW ZEALAND

PROJECT

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DEMOLITION AND REMEDIATION
PROJECT

TITLE

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



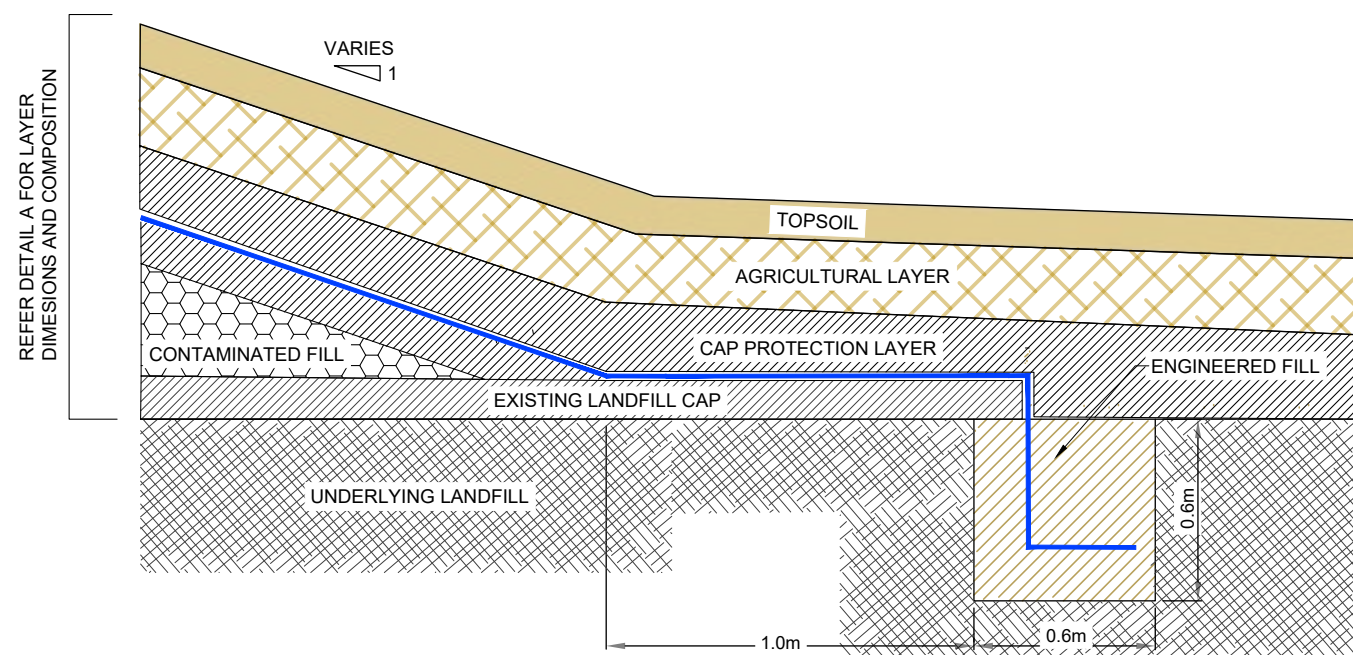
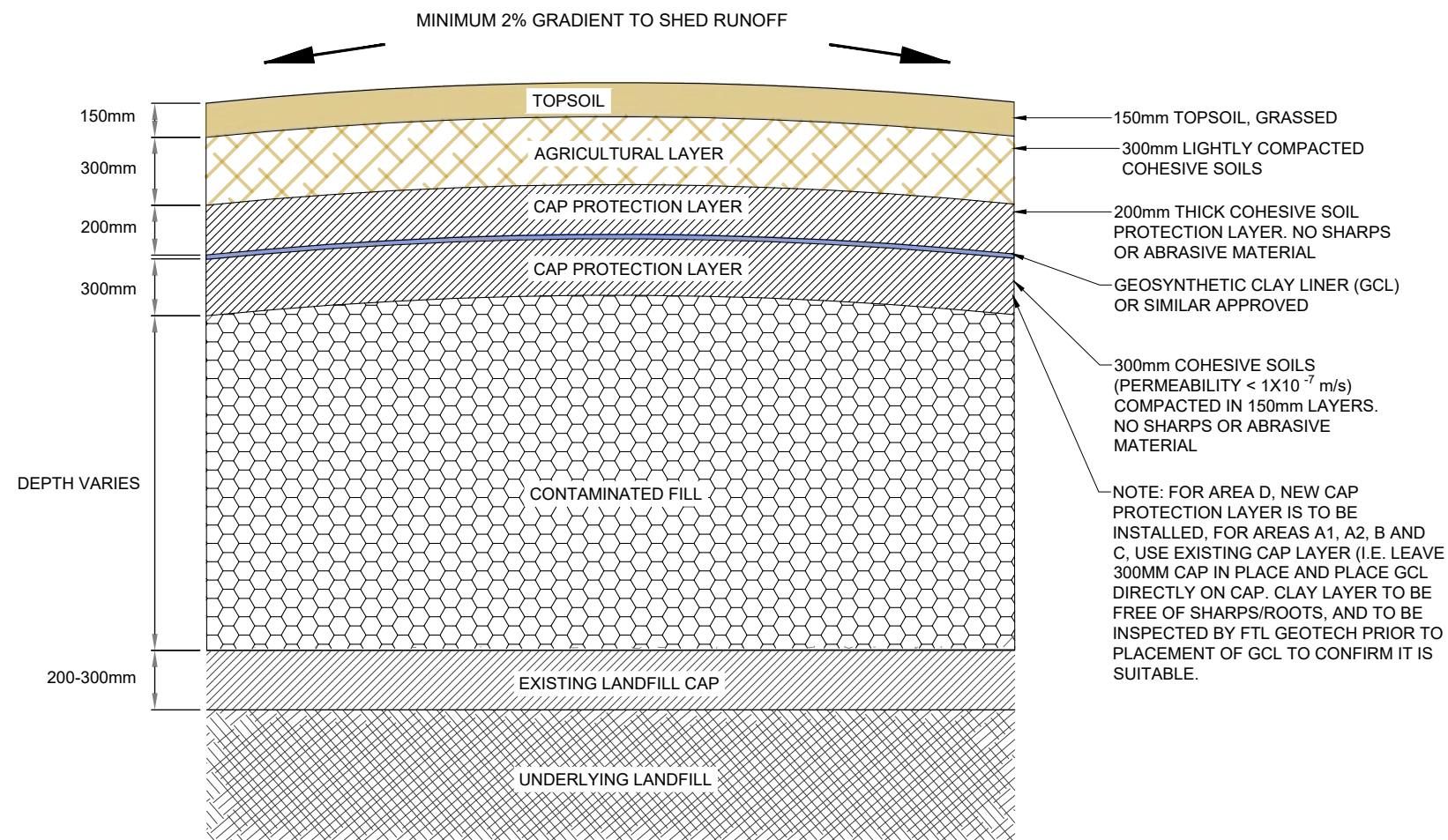
STATUS

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SCALE	1:500	(A3)
DRAWING No	33097/LF390	REVISION
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NOTES
PROJECT DATUMS: LEVEL: New Zealand Vertical Datum 2016 COORDINATE: New Zealand Transverse Mercator

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INFORMATION NEW ZEALAND

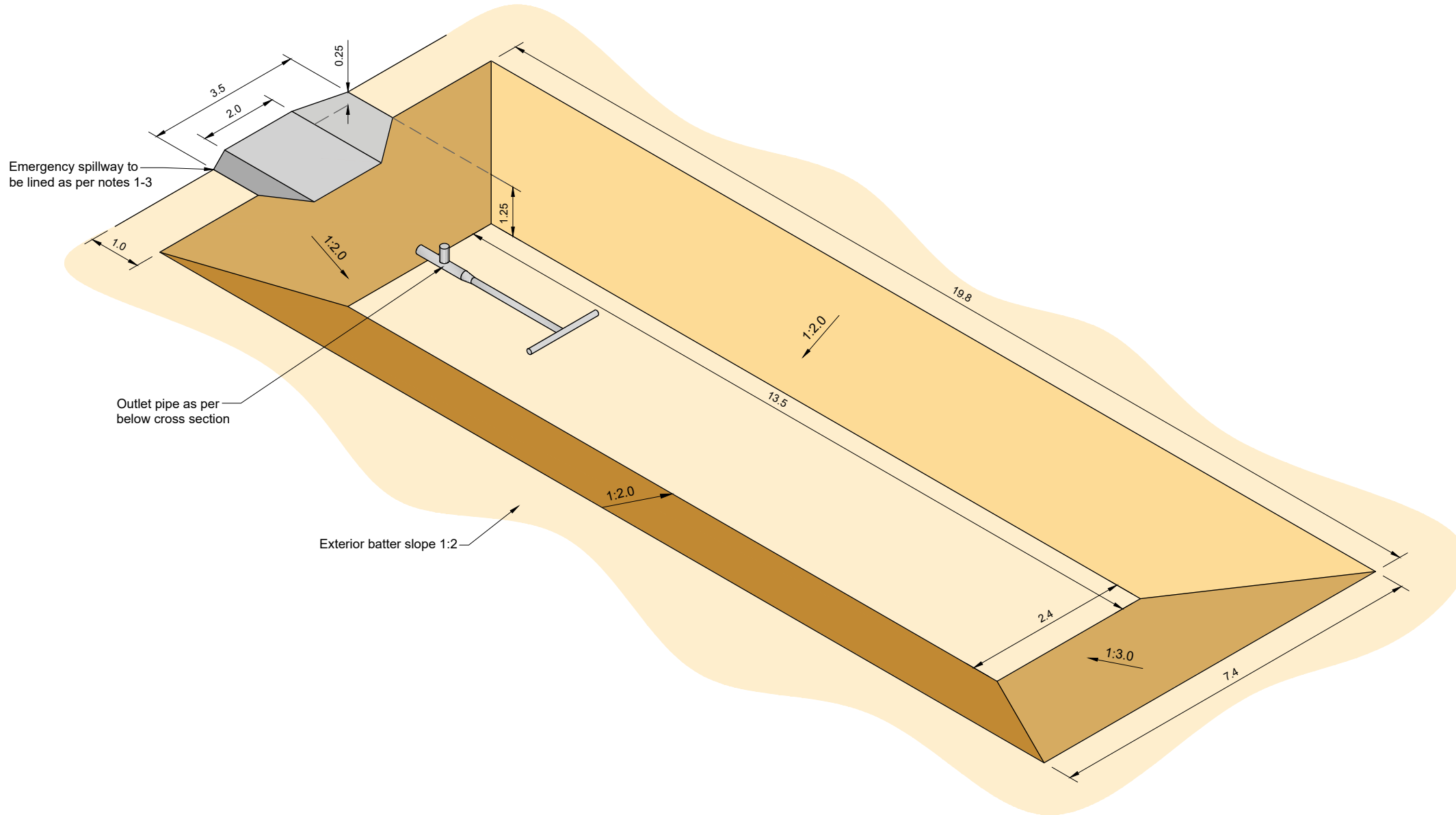
PROJECT
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DEMOLITION AND REMEDIATION
PROJECT

TITLE

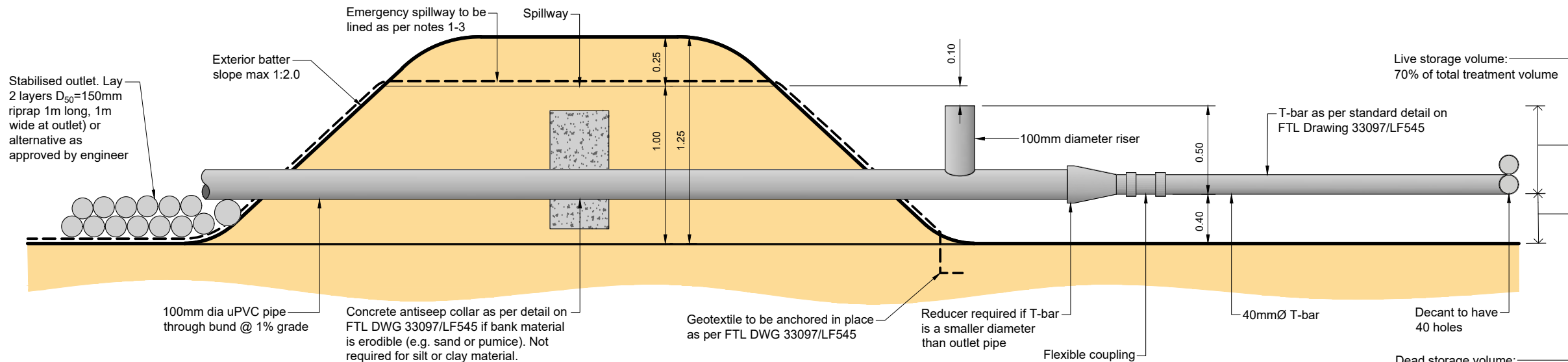
PROPOSED LANDFILL CELL
TYPICAL DETAIL

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/LF500		REVISION A

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Decanting Earth Bund Layout
NTS



Cross Section
NTS

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CHECKED	SF	05/11/24		
			SF	05/11/24
REVISION	CHANGES		CHECKED	DATE

- Notes
- Emergency spillway lined with strong woven low permeability geotextile (Bidim A14 or Duraforce AS240 or approved equivalent) overlaid with soft non-woven needle punched geotextile (Tencate Mirafi HP 280a, Duraforce WG30/30 or approved equivalent).
 - Emergency spillway to be secured with pins every 0.5m,
 - If the emergency spillway embankment is constructed with sand, pumice or other erodable material under the spillway lining, install waterproof layer underneath geotextile. Do not secure spillway with pins, instead follow alternative methodology provided in FTL Drawing 33097/LF545 based on Waikato Regional Council Earthworks series – erosion and sediment control factsheet 2019.

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DEMOLITION AND REMEDIATION
PROJECT

TITLE
DECANTING EARTH BUND
DIMENSIONS PLAN



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SCALE NTS (A3)

DRAWING No 33097/LF540 REVISION -



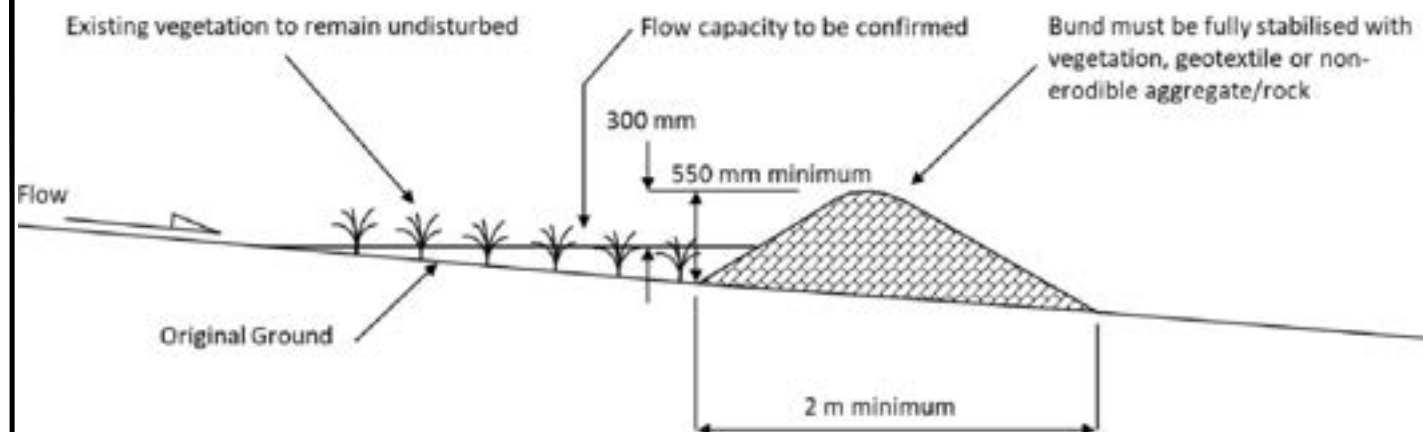
Silt Fence Standard Fabric Join



SUPER SILT FENCE DESIGN CRITERIA			
Slope %	Slope Length (m)	Spacing of Returns (m)	Length (m)
0-10	Unlimited	60	Unlimited
10-20	60	50	450
20-33	30	40	300
33-50	30	30	150
>50	15	20	75

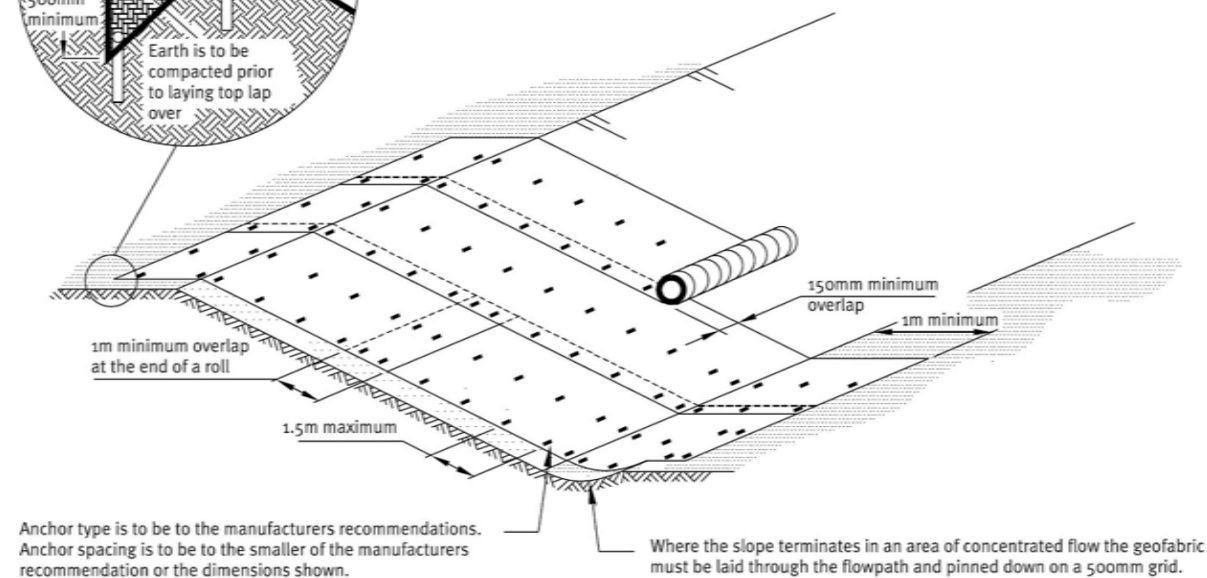
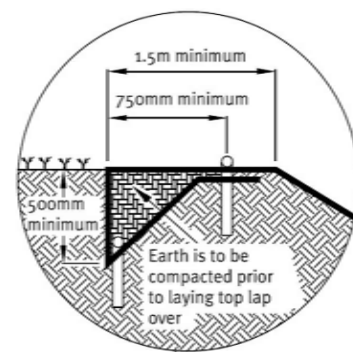
STATUS	FOR RESOURCE CONSENT Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.
SCALE	NTS (A3)
DRAWING No	33097/LF550 A
	REVISION

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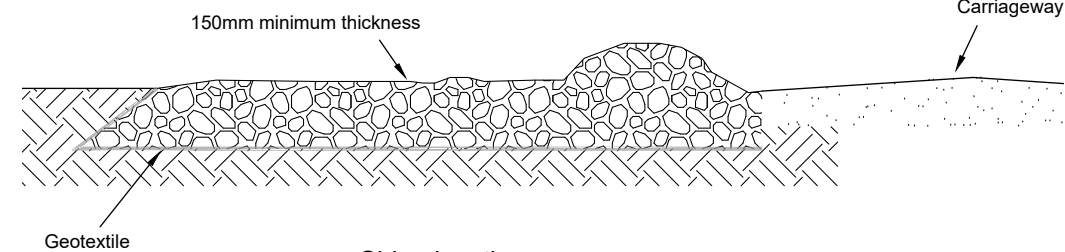
Clean Water Drain

NTS

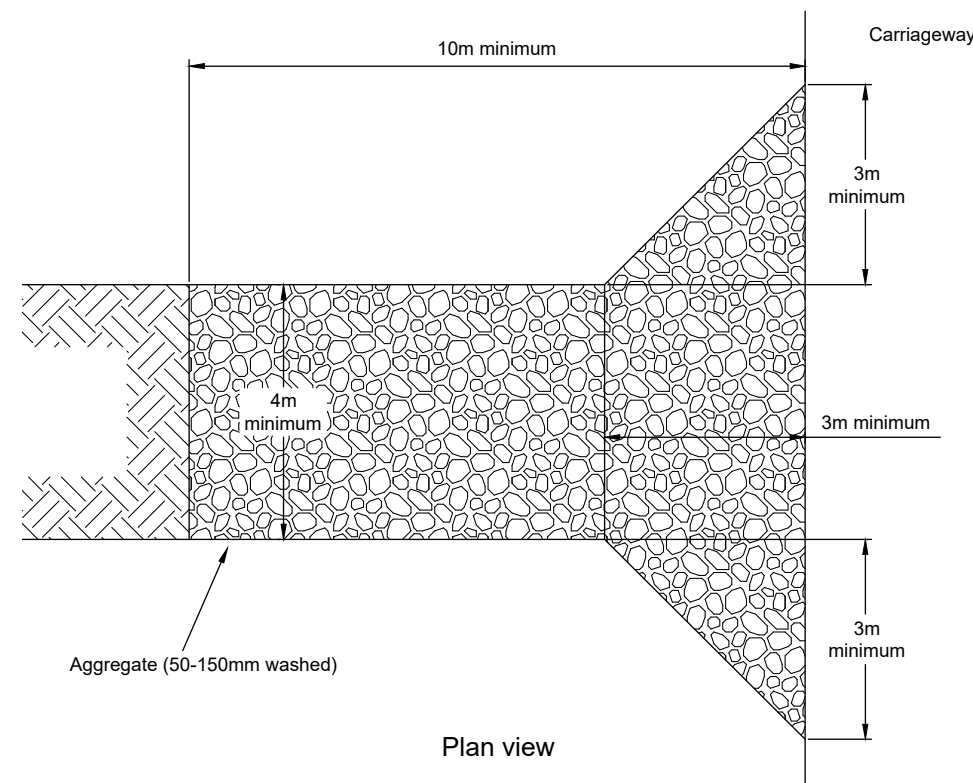


Geotextile Layout Detail

NTS

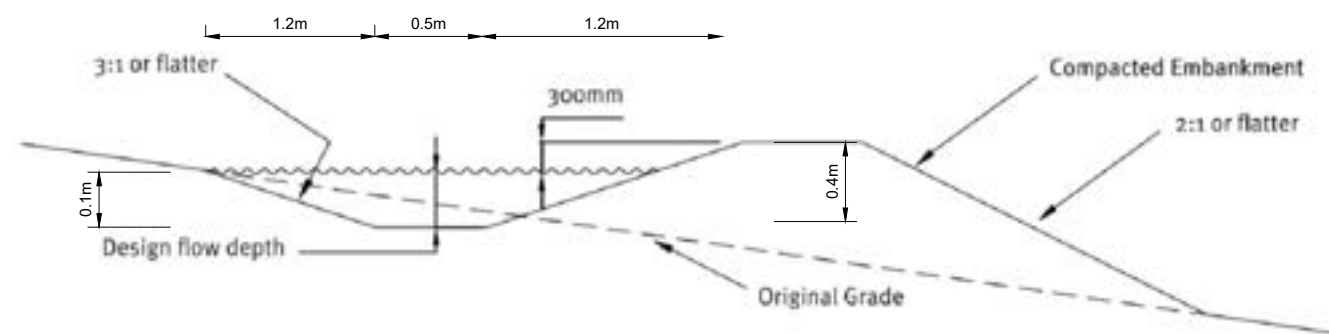


Side elevation



Stabilised Entranceway

Nts



Dirty Water Drain

NTS

Notes

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

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