

Written Approval of Affected Persons

Form 8a of the Resource Management Regulations 2003.

Affected persons written approval to an activity that is the subject of a resource consent application.

Note to affected person(s) signing written approval form:

Before asking for your written approval the applicant should fully explain the proposal to you. You should look at the application containing a description of the activity and the accompanying plans. If you decide to give written approval to this application, you must complete the form and sign the applicant's plans. You should only sign this form if you fully understand the proposal. You should seek expert or legal advice if you need the proposal or resource consent process explained to you. You may also contact Council for assistance.

Conditional written approval **cannot** be accepted. There is no obligation to sign this form, and no reasons need to be given. If signing on behalf of a trust or company, please provide additional written evidence that you have signing authority.

To be completed by the applicant

To: Name of Council that is the consent authority for this application: **Waipa District Council**

Applicant Name

Full name:

Toitu Te Whenua Land Information New Zealand

Contact daytime phone:

Bryan Daly 027 264 6885

Location of Proposed Activity

Please complete with as many details as you can, so the site for your proposal is clearly identifiable. Include details such as unit number, street number, street name and town.

Property address:

Former Tokanui Hospital Site, 149 Te Mawhai Road, Kihikihi

Legal description:

Section 1 SO 44852

Description of Proposed Activity

Please provide a brief description of your proposal, including which District Plan Rules or standards are infringed.

Landfill upgrade including reopening, adding new material, consolidating existing material and closing/recapping, culvert replacement



V2 | 20.11.19

To be completed by affected person:

Owner to Complete



I/we are also the occupier(s)

Full name of all property owners:

AgResearch Limited - N.Z. Institute

Being the owner/s of Street address:

23 Farm Road, Tokanui

Occupier to Complete



I/we are also the occupier(s)

Full name of all occupiers:

Being the occupiers of Street address:

Legal description:

Section 3 SO 534156

Legal description:



I/we have authority to sign on behalf of all of the owners of the property.



I/we have read the full application for resource consent, the Assessment of Environmental Effects and any associated plans.



I/we have signed and dated each page.



Declaration: In signing this written approval, I/we understand that Council must decide that I/we are no longer an affected person, and Council must not have regard to any adverse effect on me/us.



I/we understand that I/we may withdraw my/our written approval by giving written notice to Council before the hearing, if there is one, or, if there is not, before the application is determined.



I/we have authority to sign on behalf of all of the occupiers of the property.



I/we have read the full application for resource consent, the Assessment of Environmental Effects and any associated plans.



I/we have signed and dated each page.

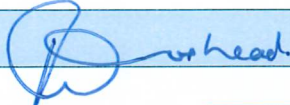


Declaration: In signing this written approval, I/we understand that Council must decide that I/we are no longer an affected person, and Council must not have regard to any adverse effect on me/us.



I/we understand that I/we may withdraw my/our written approval by giving written notice to Council before the hearing, if there is one, or, if there is not, before the application is determined.

Signed (All owners or authorised persons):



Date:

21/08/2025

Fax/Email:

john.coxhead@agresearch.co.nz

Contact Phone Number:

027 5555 641

Postal Address:

Private Bag 4749
Christchurch 8140.

Signed (All occupiers or authorised persons):

Date:

Fax/Email:

Contact Phone Number:

Postal Address:



**NEW ZEALAND
COMPANIES OFFICE**

**COMPANIES
REGISTER**

Certificate of Amalgamation

**NEW ZEALAND INSTITUTE FOR BIOECONOMY
SCIENCE LIMITED**

(550377)

NZBN: 9429038975189

This is to certify that on the 1st day of July 2025:

AGRESEARCH LIMITED (552736) and

LANDCARE RESEARCH NEW ZEALAND LIMITED (546064) and

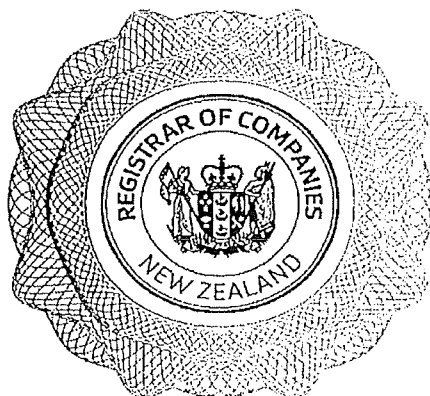
THE NEW ZEALAND INSTITUTE FOR PLANT AND FOOD RESEARCH LIMITED

(547965) and

NEW ZEALAND FOREST RESEARCH INSTITUTE LIMITED (550377)

amalgamated under Part XIII of the Companies Act 1993 to become **NEW
ZEALAND INSTITUTE FOR BIOECONOMY SCIENCE LIMITED (550377)** which was
formerly known as **NEW ZEALAND FOREST RESEARCH INSTITUTE LIMITED.**

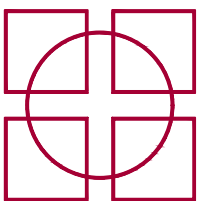
Registrar of Companies
Dated this 1st day of July 2025



FORMER TOKANUI HOSPITAL

DEMOLITION AND REMEDIATION PROJECT

TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND



Fraser
Thomas

33097

FOR TENDER

ISSUE SET 6

20/08/25

LIST OF DRAWINGS

DRAWING	DRAWING TITLE	ISSUE SET						
			1	2	3	4	5	6
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
33097/LF551	EROSION AND SEDIMENT CONTROL DETAILS PAGE 2	-	-	-	-	-	-

Legend

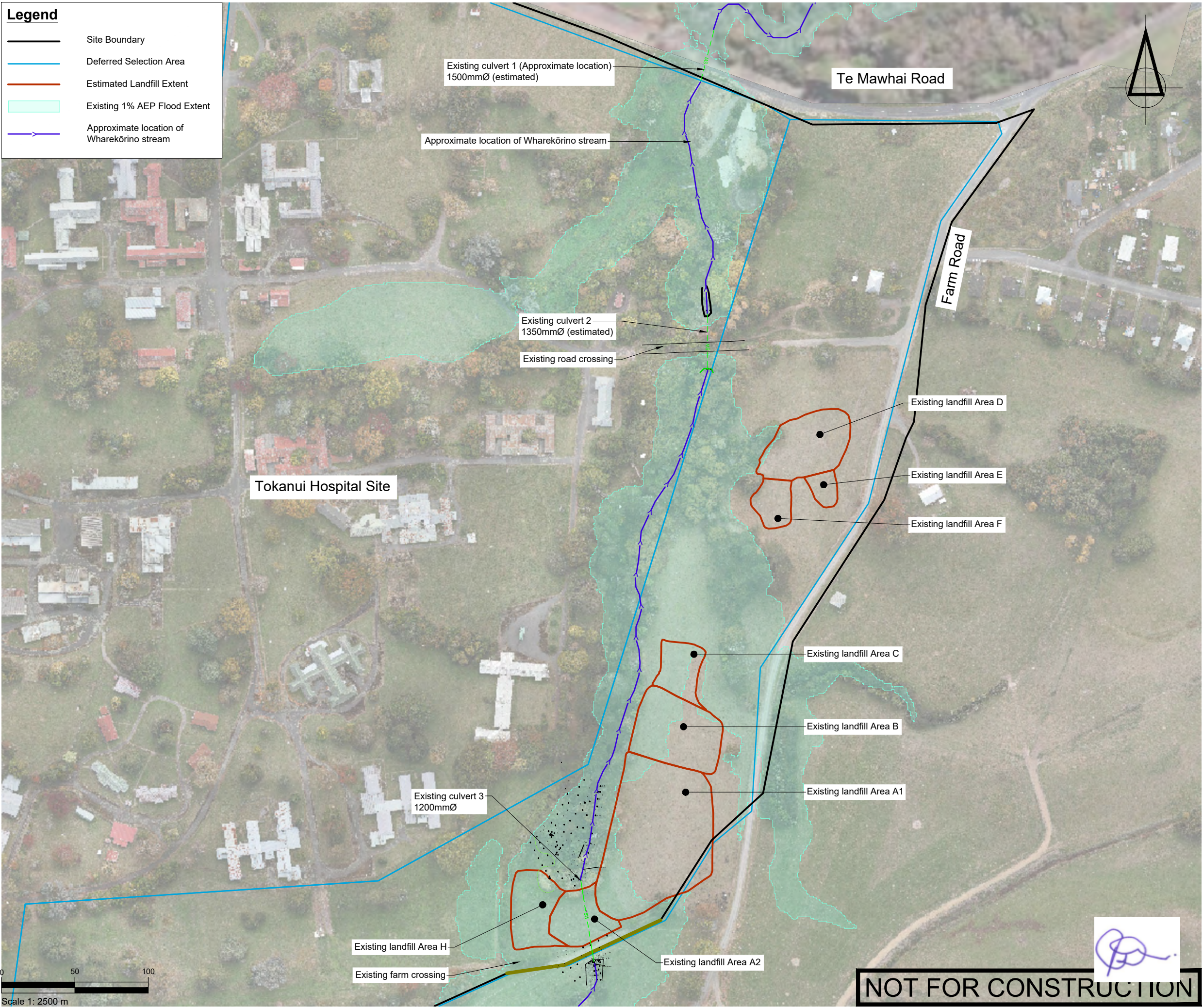
Site Boundary

Deferred Selection Area

Estimated Landfill Extent

Existing 1% AEP Flood Extent

Approximate location of Wharekōrino stream



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

CLIENT

TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT

FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

EXISTING LANDFILL OVERVIEW
PLAN

Fraser
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HAWKE'S BAY 06 211 2766

CHRISTCHURCH 03 358 5936

BLenheim 03 428 3292

NELSON 03 222 1132

TAURANGA 07 220 9277

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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 1:2500 (A3)

DRAWING No 33097/LF001 REVISION A

Legend

Site Boundary

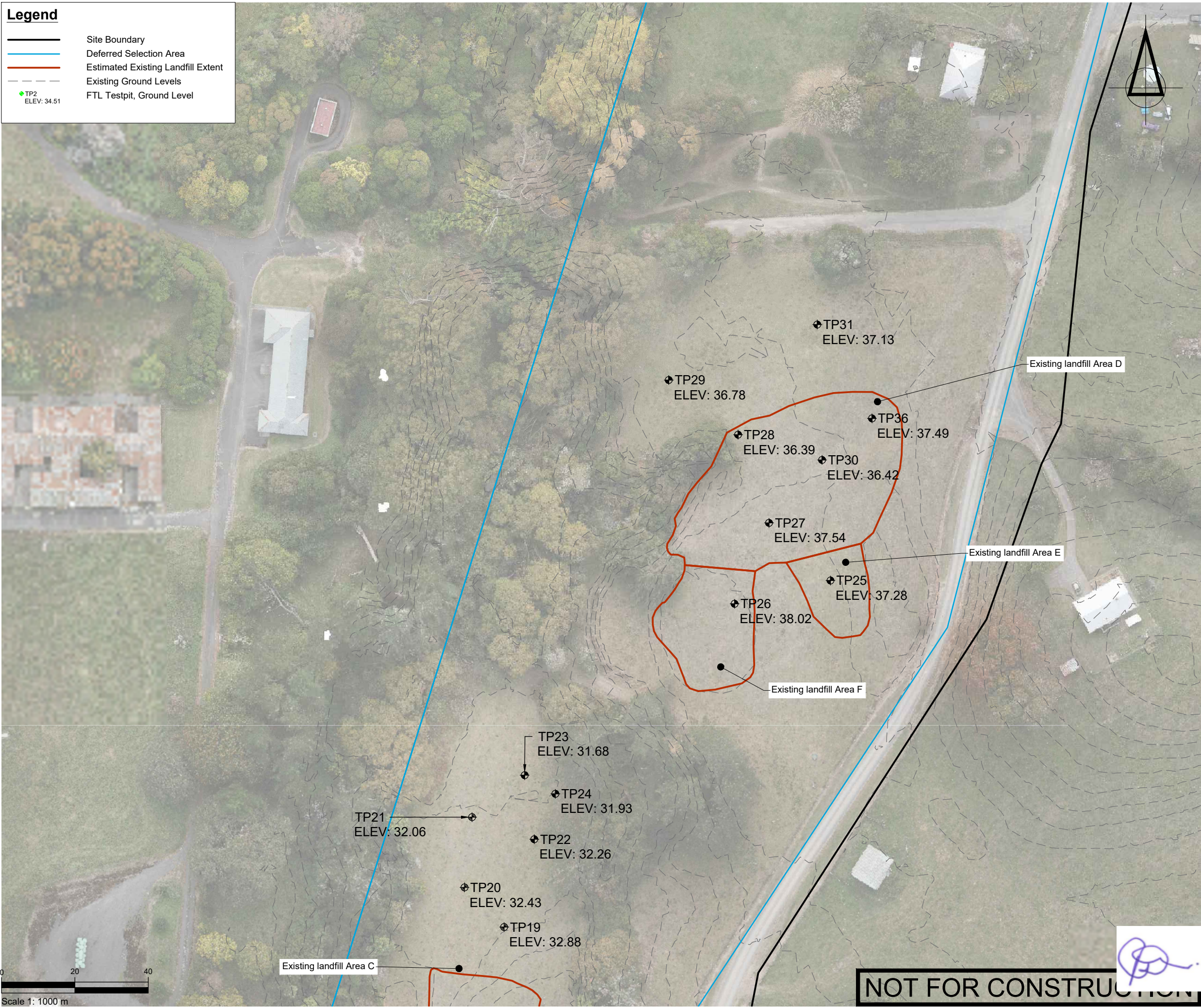
Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

TP2
ELEV: 34.51

FTL Testpit, Ground Level



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CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
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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

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SCALE 1:1000 (A3)

DRAWING No 33097/LF002 REVISION A

Legend

Site Boundary

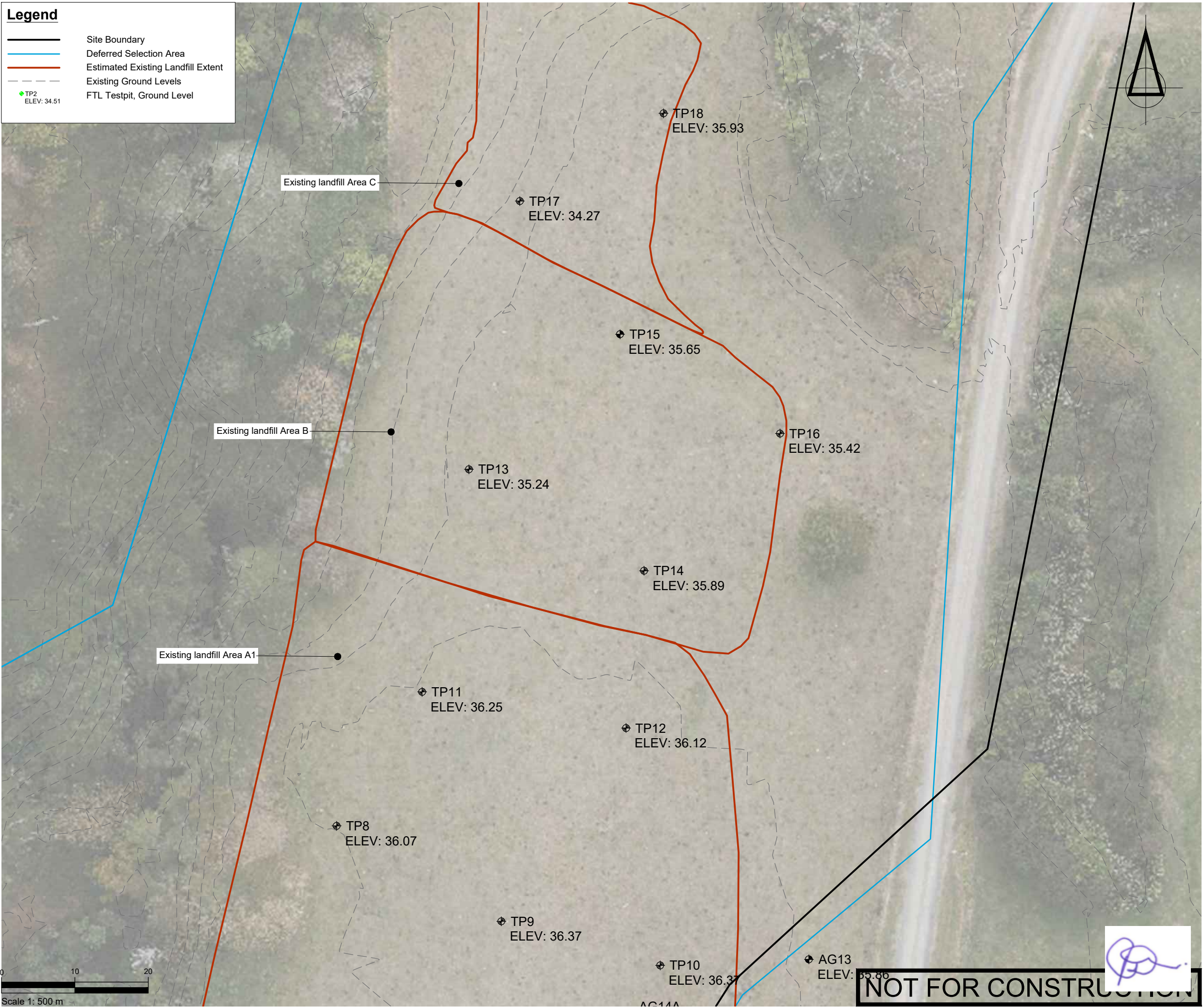
Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

TP2
ELEV: 34.51

FTL Testpit, Ground Level



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DRAWN	TB	15/08/24			
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REVISION	CHANGES			CHECKED	DATE
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TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT
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DEMOLITION AND REMEDIATION
PROJECT

TITLE
INTRUSIVE GROUND
INVESTIGATION TEST PIT
LOCATION PLAN 2 OF 3

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SCALE 1:500 (A3)

DRAWING No 33097/LF003

REVISION A

Legend

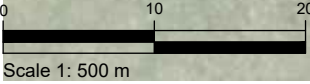
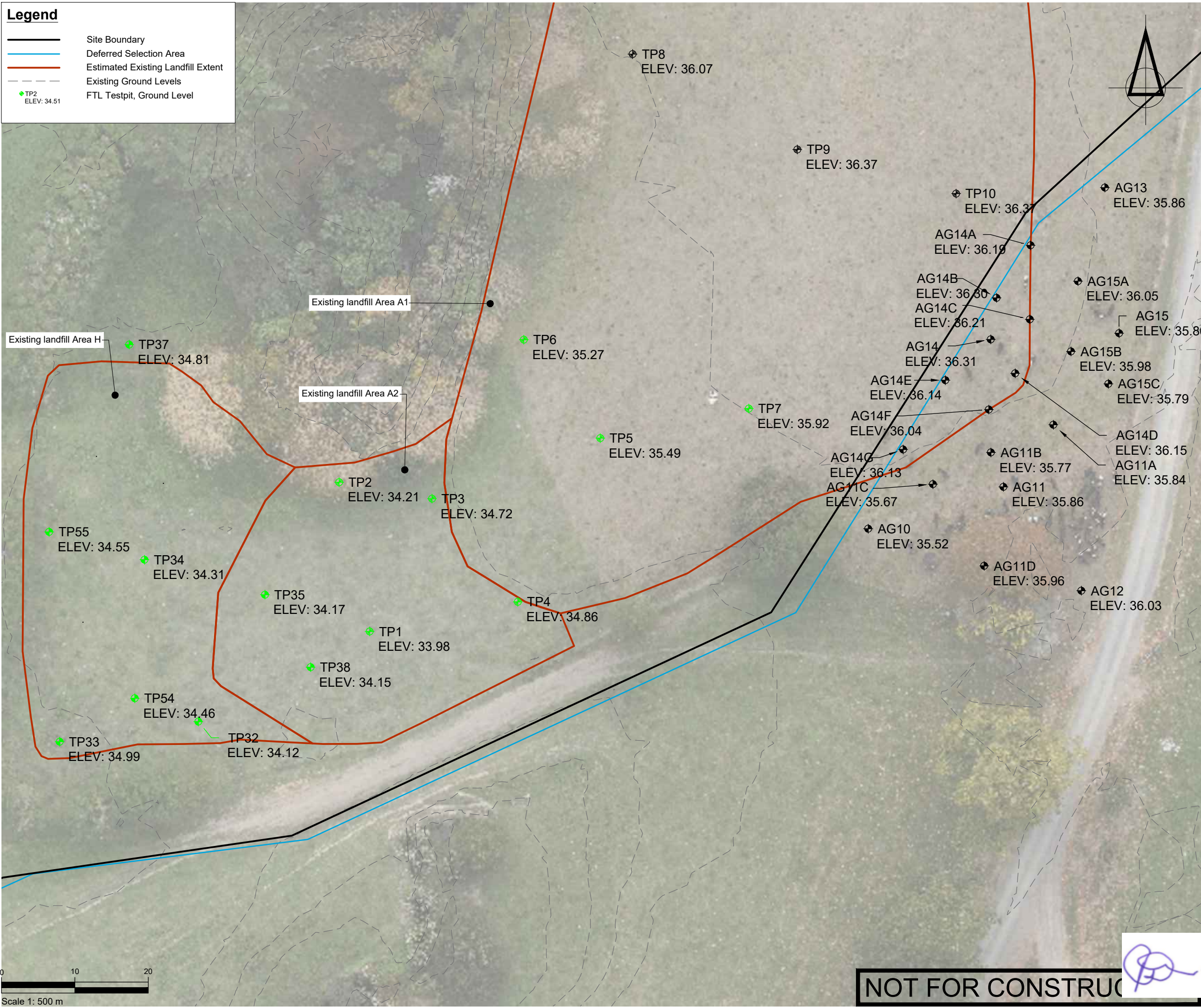
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

FTL Testpit, Ground Level



NOT FOR CONSTRUCTION

SURVEYED			APPROVED SF 05/11/24	DATE	
DESIGNED	TB	14/08/24			
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NOTES

PROJECT DATUMS:
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CLIENT
TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE
INTRUSIVE GROUND
INVESTIGATION TEST PIT
LOCATION PLAN 3 OF 3

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SCALE 1:500 (A3)

DRAWING No 33097/LF004 REVISION A

Legend

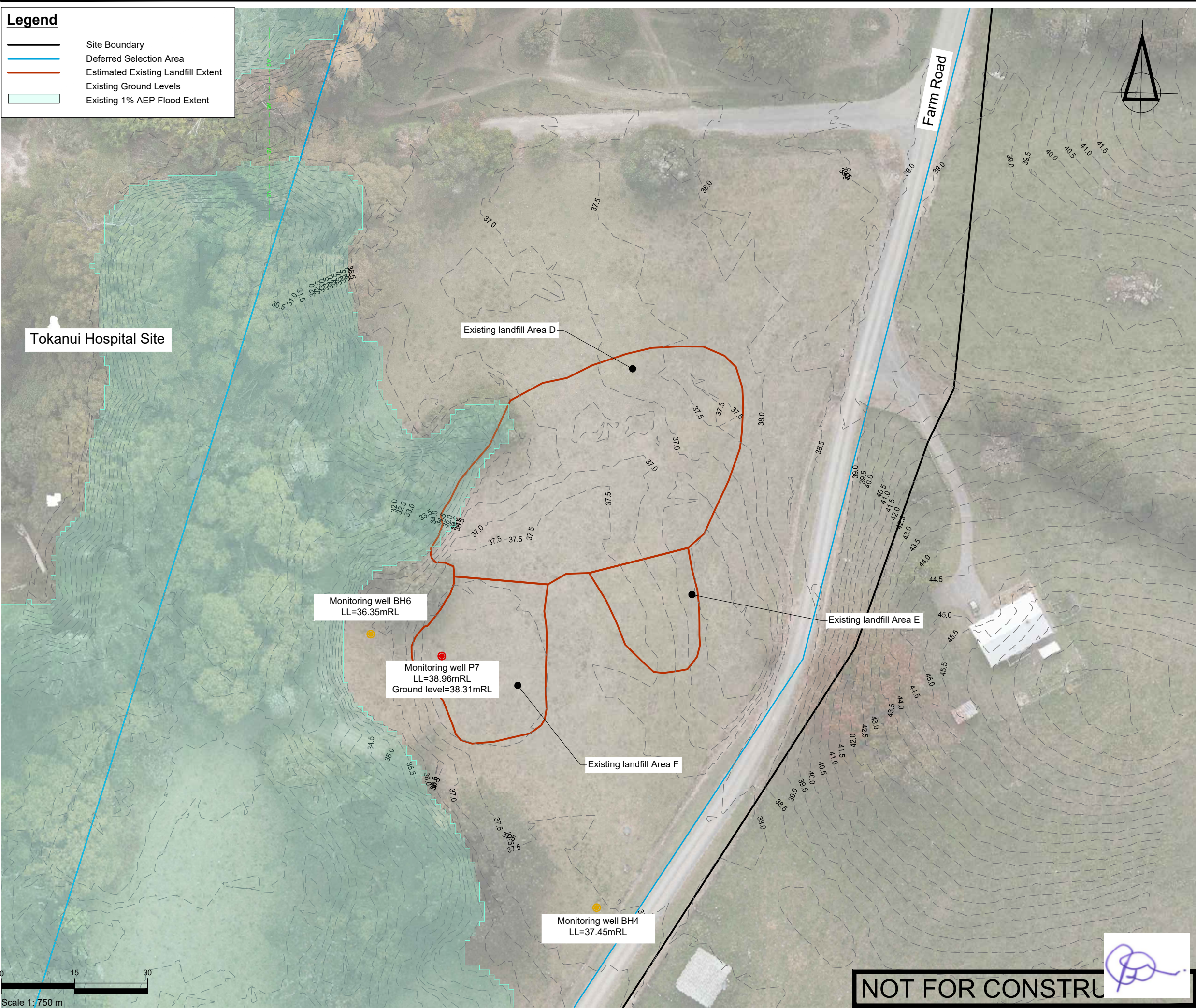
Site Boundary

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			
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CHECKED	SF	05/11/24			
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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 D, E
AND F 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

1:750

(A3)

DRAWING No

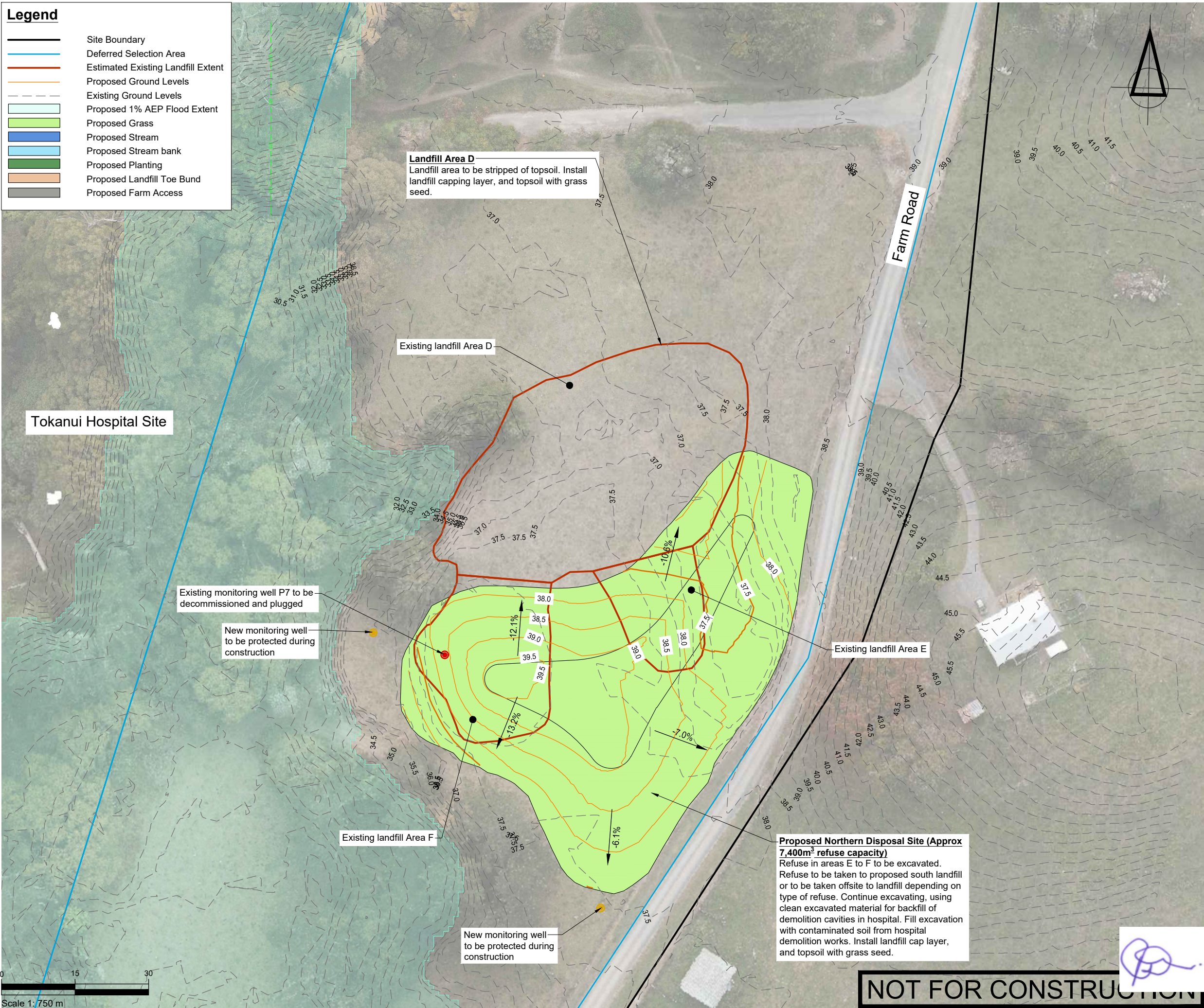
33097/LF100

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



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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

CLIENT
TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE
PROPOSED NORTHERN
DISPOSAL SITE CELL
PROPOSED FINAL DESIGN PLAN

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SCALE	1:750	(A3)
DRAWING No	33097/LF110	REVISION
		A

NOT FOR CONSTRUCTION

Legend

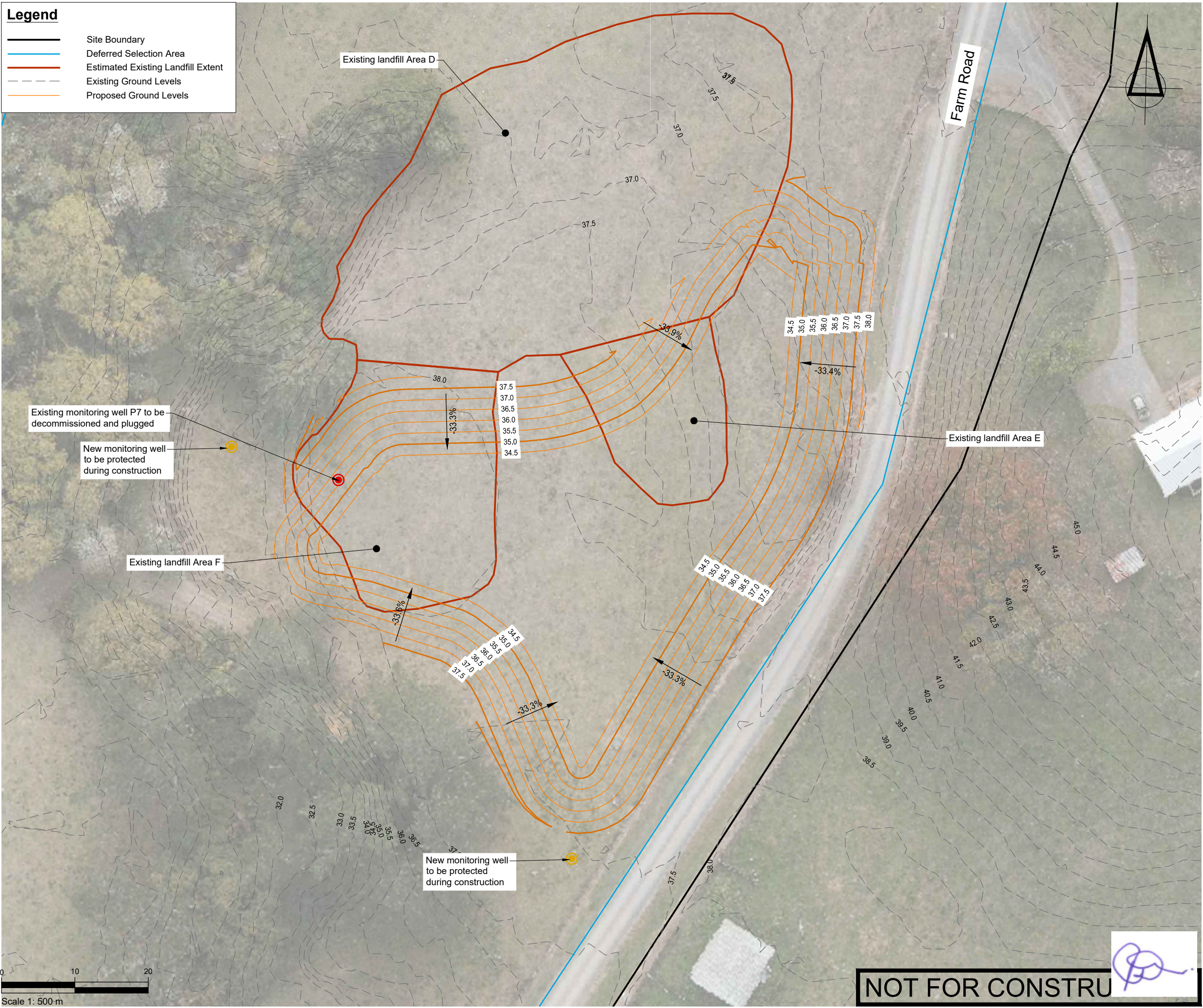
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

Proposed Ground Levels



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CLIENT

TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT

FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

PROPOSED NORTHERN
DISPOSAL SITE CELL
BASE OF CELL LEVELS PLAN

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AUCKLAND

HAWKE'S BAY

CHRISTCHURCH

BLenheim

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SCALE

1:500

(A3)

DRAWING No

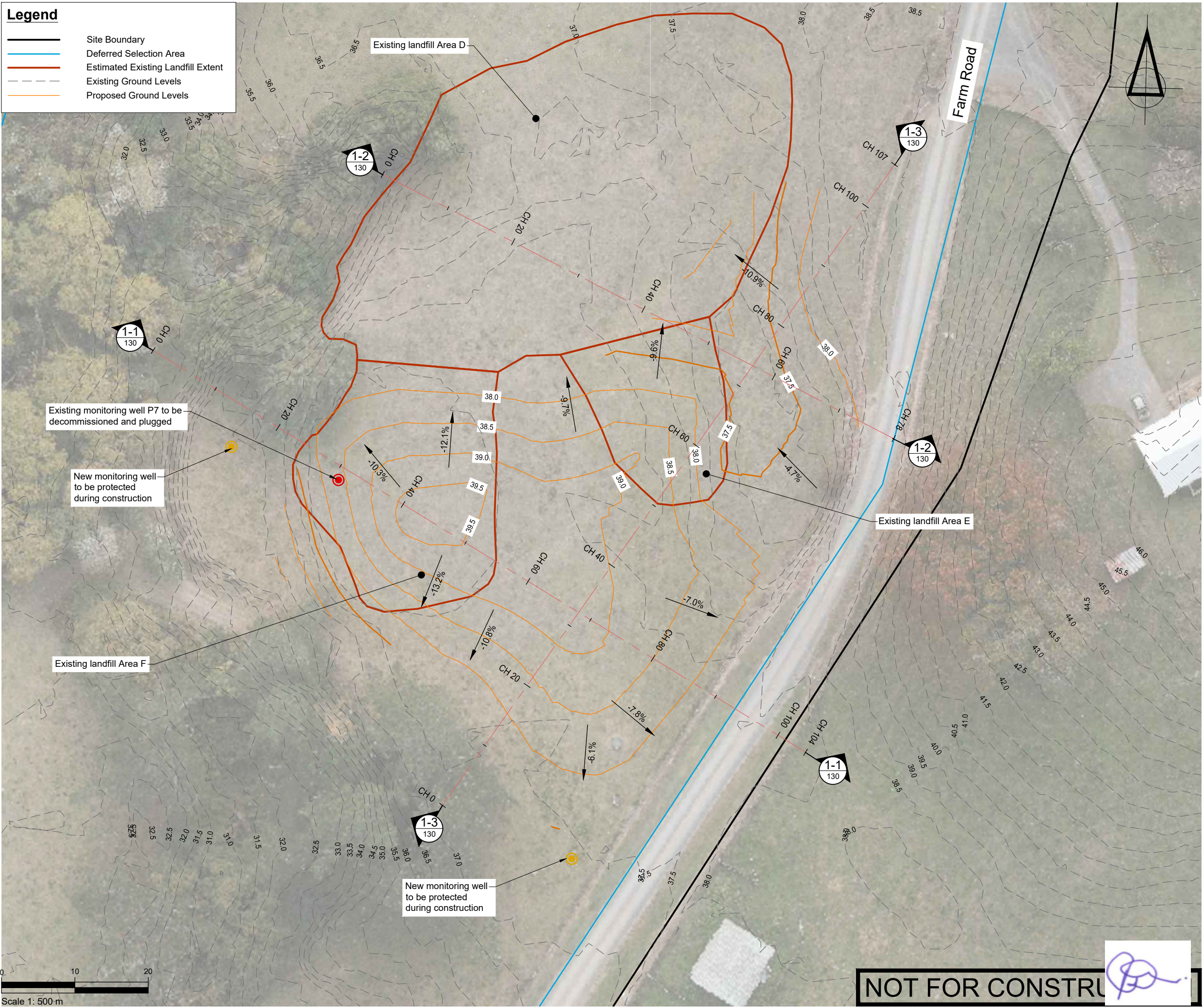
33097/LF120

REVISION

A

Legend

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



SURVEYED	TB	14/08/24	APPROVED	SF	DATE
DRAWN	TB	21/08/24			
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CLIENT
**TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND**

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

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

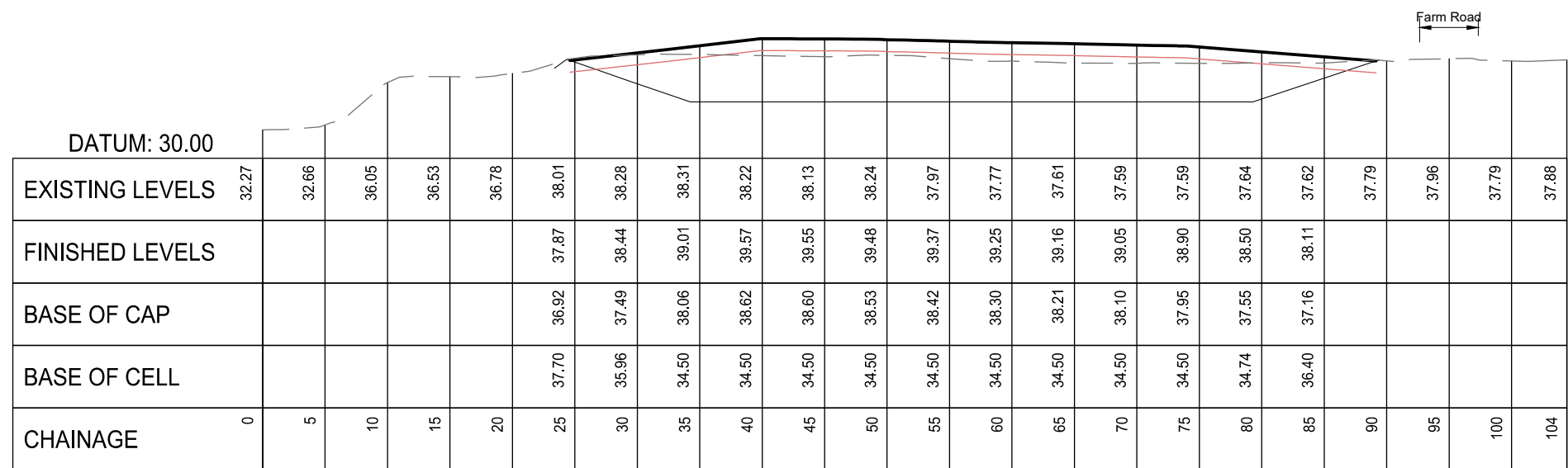


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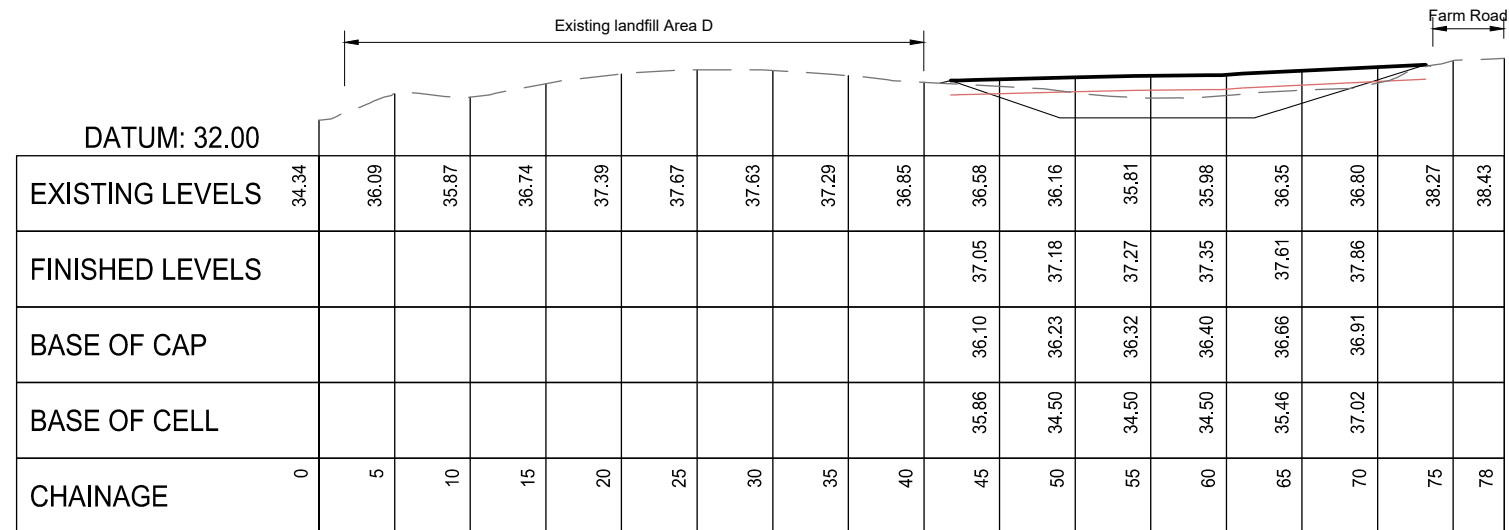
STATUS
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Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

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

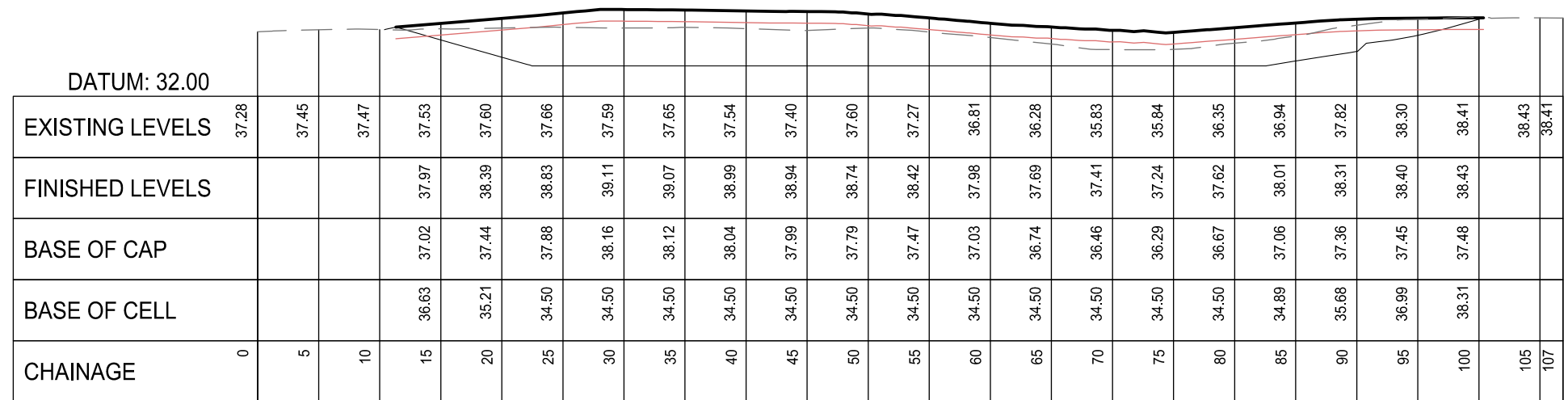
 Existing Ground
 Finished Ground
 Proposed Cap
 Proposed Cell Base



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 CONSTRU

[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

FORMER TOKANUI HOSPITAL DEMOLITION AND REMEDIATION PROJECT

TITLE

PROPOSED NORTHERN DISPOSAL SITE CELL CROSS SECTIONS



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CHRISTCHURCH	03 358 5936
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SCALE 1:500

3)

DRAWING No

VISION

33097/LF130

A |

 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	
2	-1.50	-0.50	
3	-0.50	6.28	

Existing landfill Area D-

Existing landfill Area F.

Farm Road

Existing landfill Area E

Northern Disposal Area:

Area = 4000m^2

1. Strip volumes:
 - 1.1. Topsoil = 400m^3 (assumed 100mm topsoil)
 - 1.2. Capping material area E = 132m^3
 - 1.3. Capping material area F = 280m^3
 - 1.4. Landfill material area F = 246m^3 (estimate offal pit volume)

2. Total cut to fill of subgrade
 - 2.1. Cut = 5900m³
 - 2.2. Fill = 0m³
 - 2.3. Balance = 5900m³ cut

Existing Landfill Area D

Area = 2200m^2

1. Strip volumes:
 - 1.1. Topsoil = 300m^3 (assumed 140mm topsoil)
 - 1.2. Capping material area $D = 0\text{m}^3$ (minimal existing capping)
2. Capping volume:
 - 2.1. Clay or other suitable material = 1800m^3
 - 2.2. Topsoil = 330m^3

[illegible]

NOTES

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

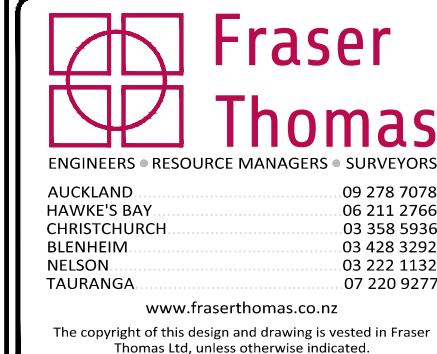
CLIENT

TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

PROPOSED NORTHERN
DISPOSAL SITE CELL
CELL FORMATION CUT AND FILL
PLAN



STATUS

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

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Scale 1: 500 m

Legend

Site Boundary

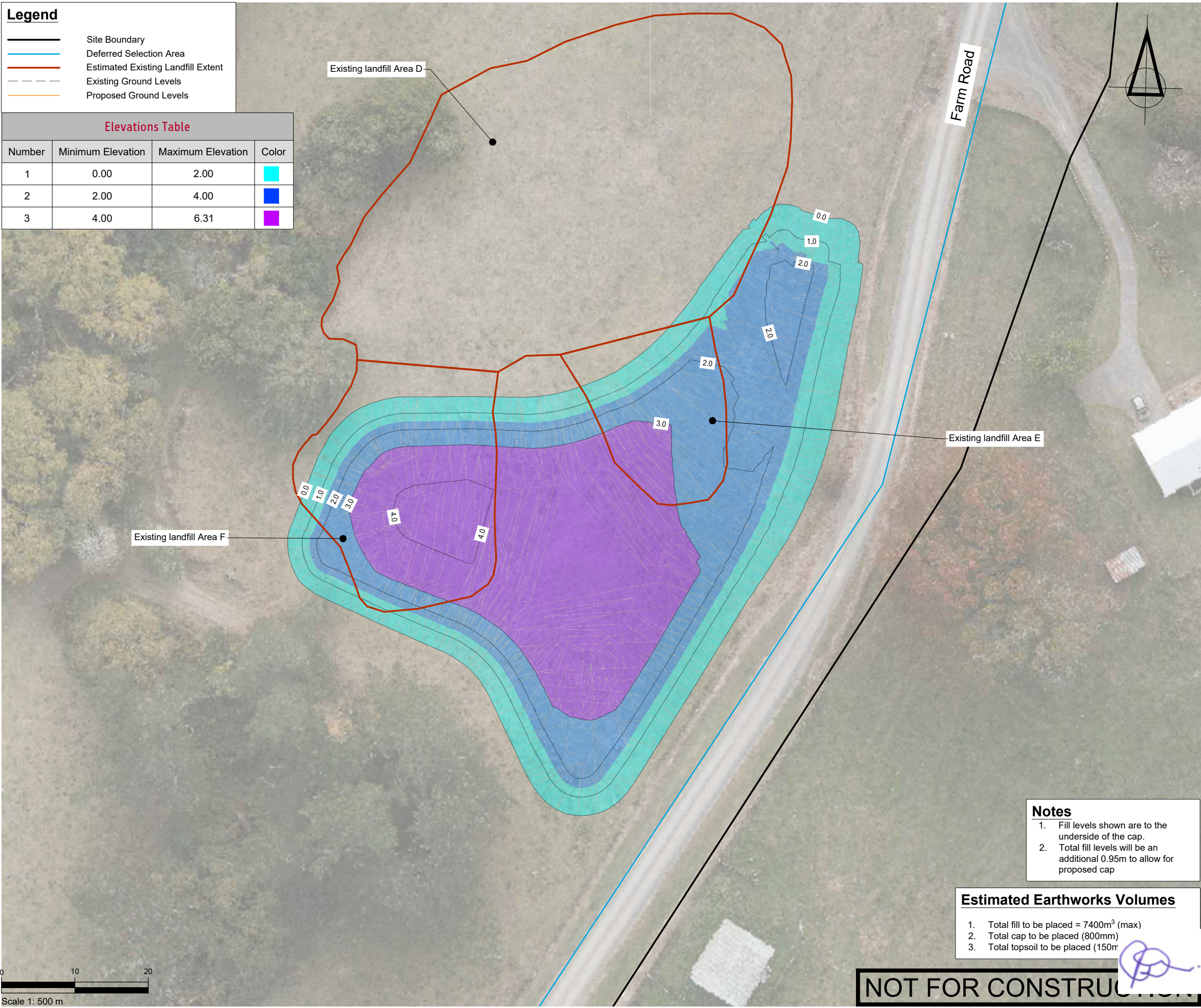
Deferred Selection Area

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	



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NOTES

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PROPOSED NORTHERN
DISPOSAL SITE CELL
FILLING PLAN

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- Notes
1. Fill levels shown are to the underside of the cap.

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

- Estimated Earthworks Volumes
1. Total fill to be placed = 7400m³ (max)

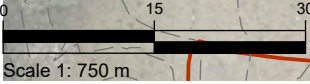
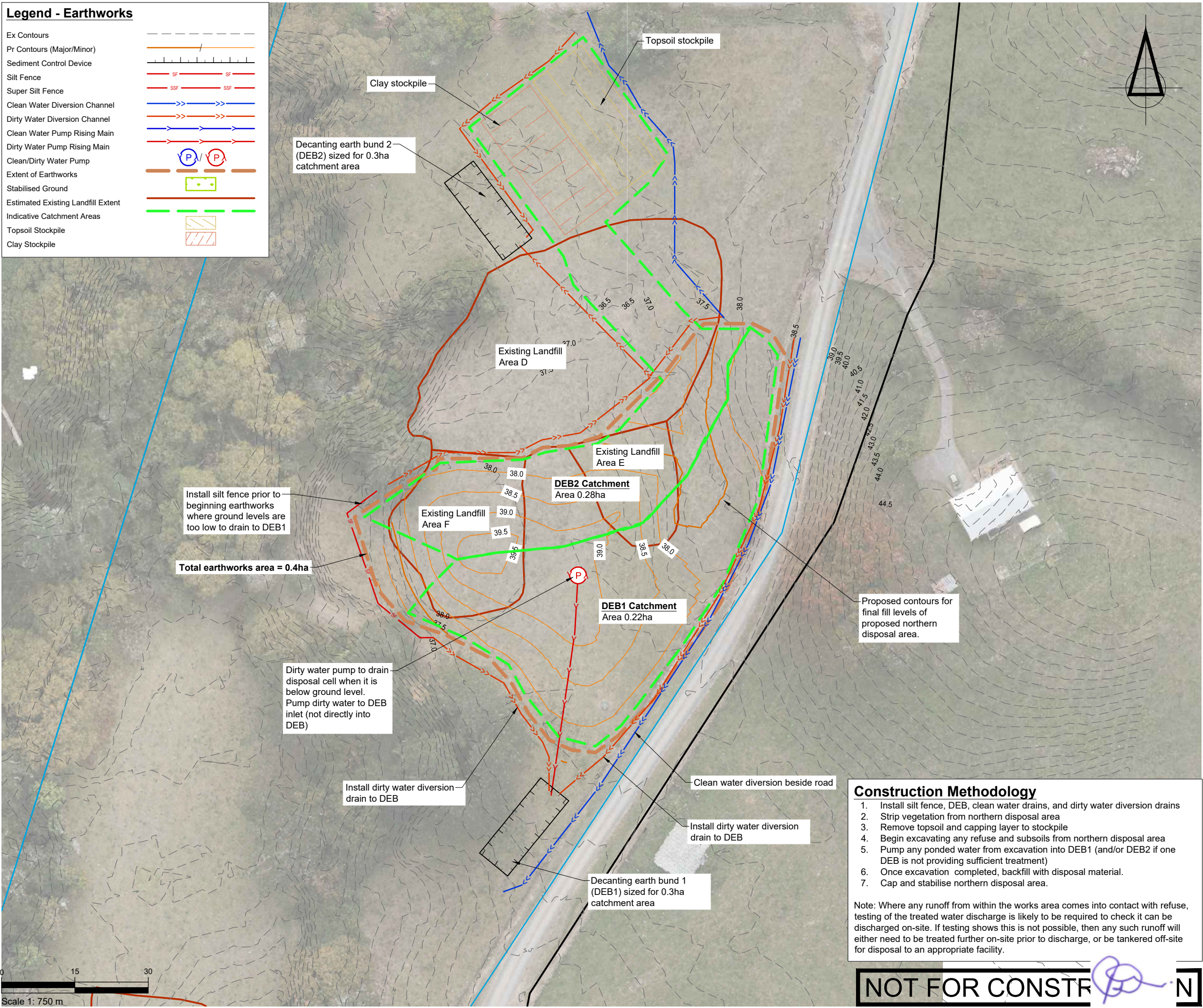
2. Total cap to be placed (800mm)

3. Total topsoil to be placed (150m³)

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	



Construction Methodology

1. Install silt fence, DEB, clean water drains, and dirty water diversion drains
2. Strip vegetation from northern disposal area
3. Remove topsoil and capping layer to stockpile
4. Begin excavating any refuse and subsoils from northern disposal area
5. Pump any ponded water from excavation into DEB1 (and/or DEB2 if one DEB is not providing sufficient treatment)
6. Once excavation completed, backfill with disposal material.
7. Cap and stabilise northern disposal area.

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.

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NOTES

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INFORMATION NEW ZEALAND

PROJECT
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PROJECT

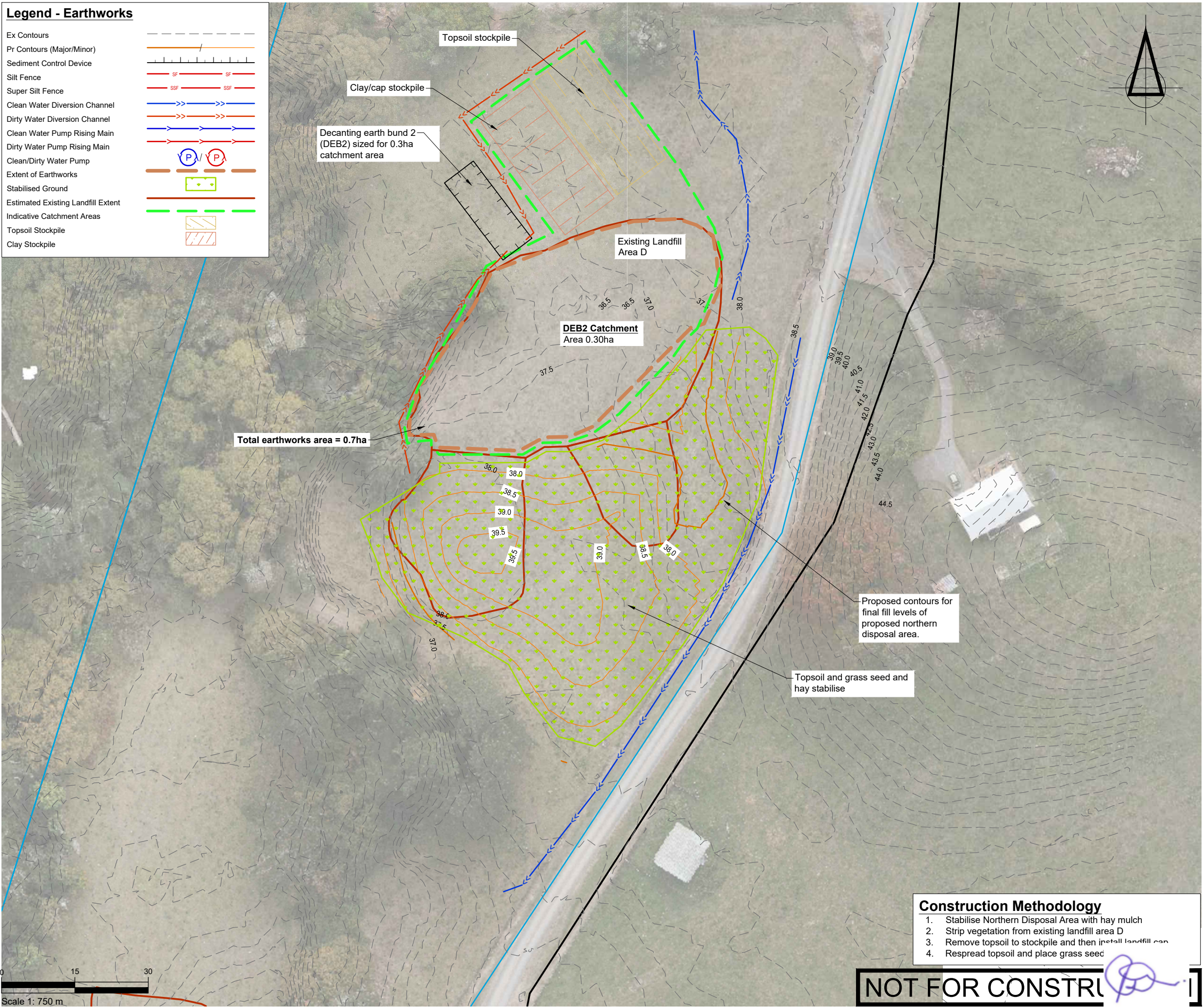
TITLE
PROPOSED NORTHERN
DISPOSAL SITE CELL
EROSION AND SEDIMENT
CONTROL PLAN PHASE 1

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DRAWING No 33097/LF190	REVISION A

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

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DRAWING No 33097/LF191	REVISION A

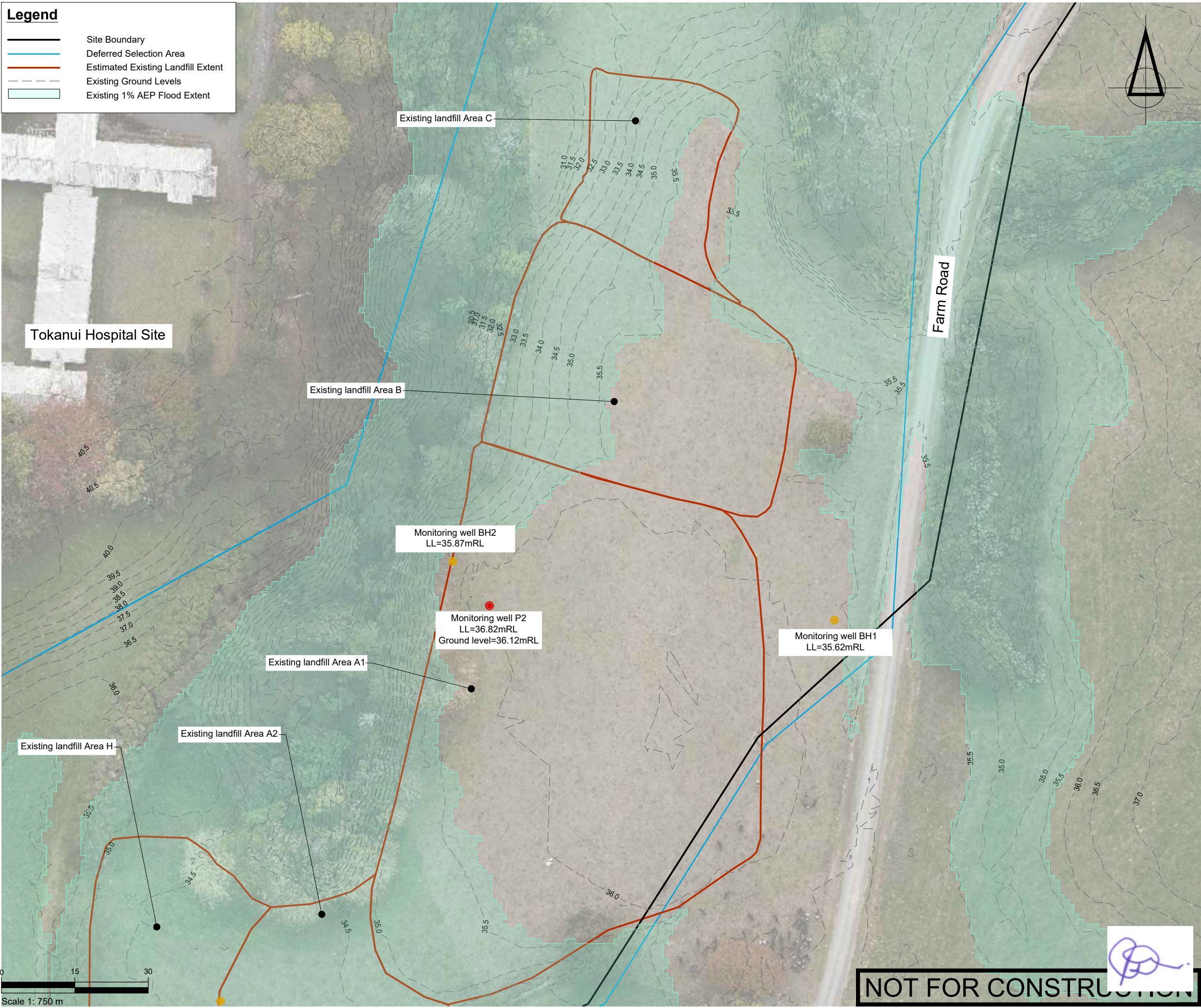
Construction Methodology

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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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

Existing landfill Area C

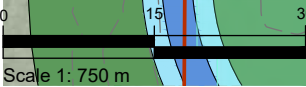
Farm Road

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.



Scale 1: 750 m



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A	STH LF TOE BUND ADDED			SF	20/11/24
B	AREA A2/H REDESIGN			SF	23/05/25

NOTES

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TITLE
PROPOSED SOUTHERN
DISPOSAL SITE CELL
PROPOSED FINAL DESIGN PLAN



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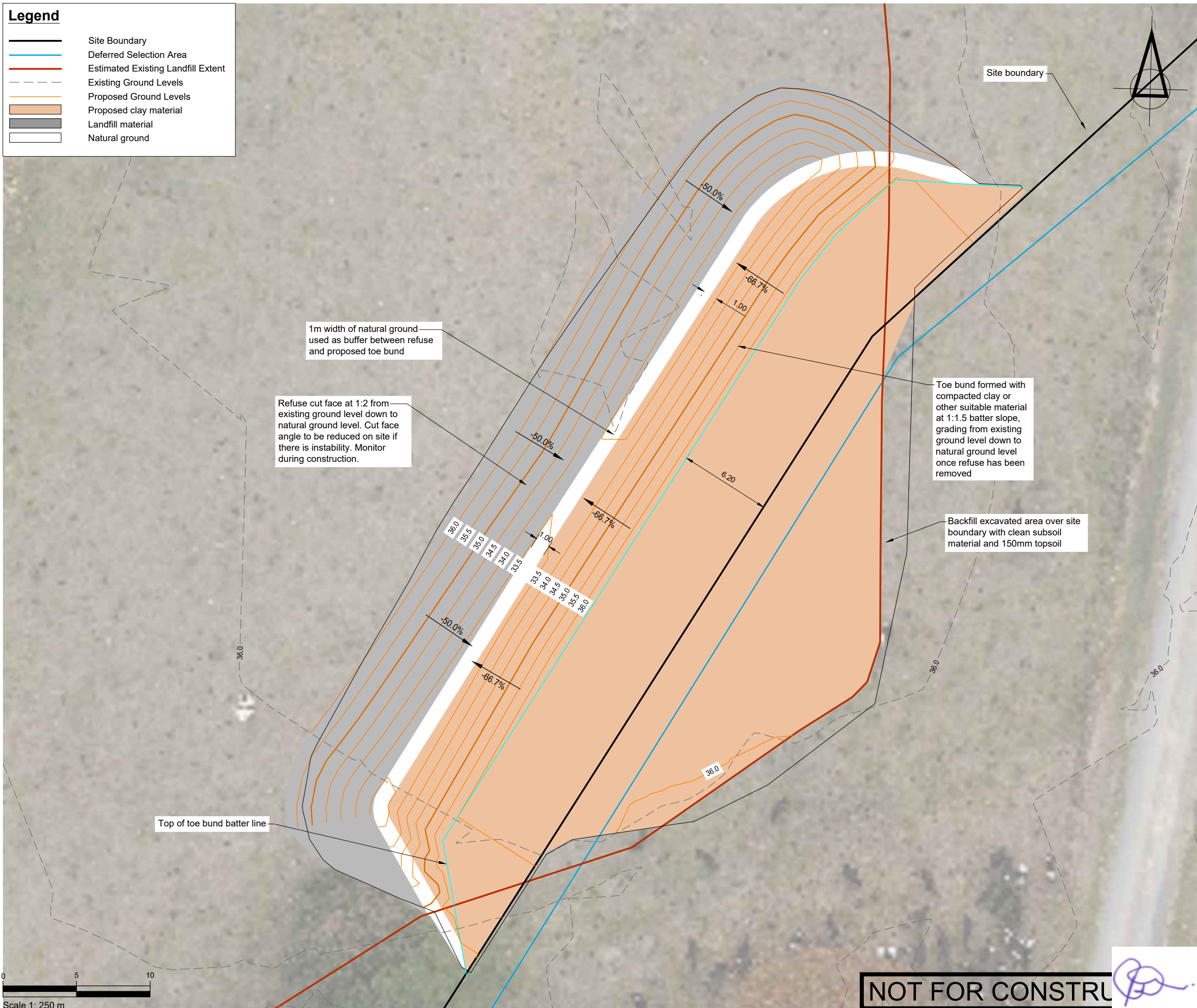
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SCALE	1:750	(A3)	
DRAWING No	33097/LF210	REVISION	B

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

[illegible]

NOTES	
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PROJECT DATUMS:
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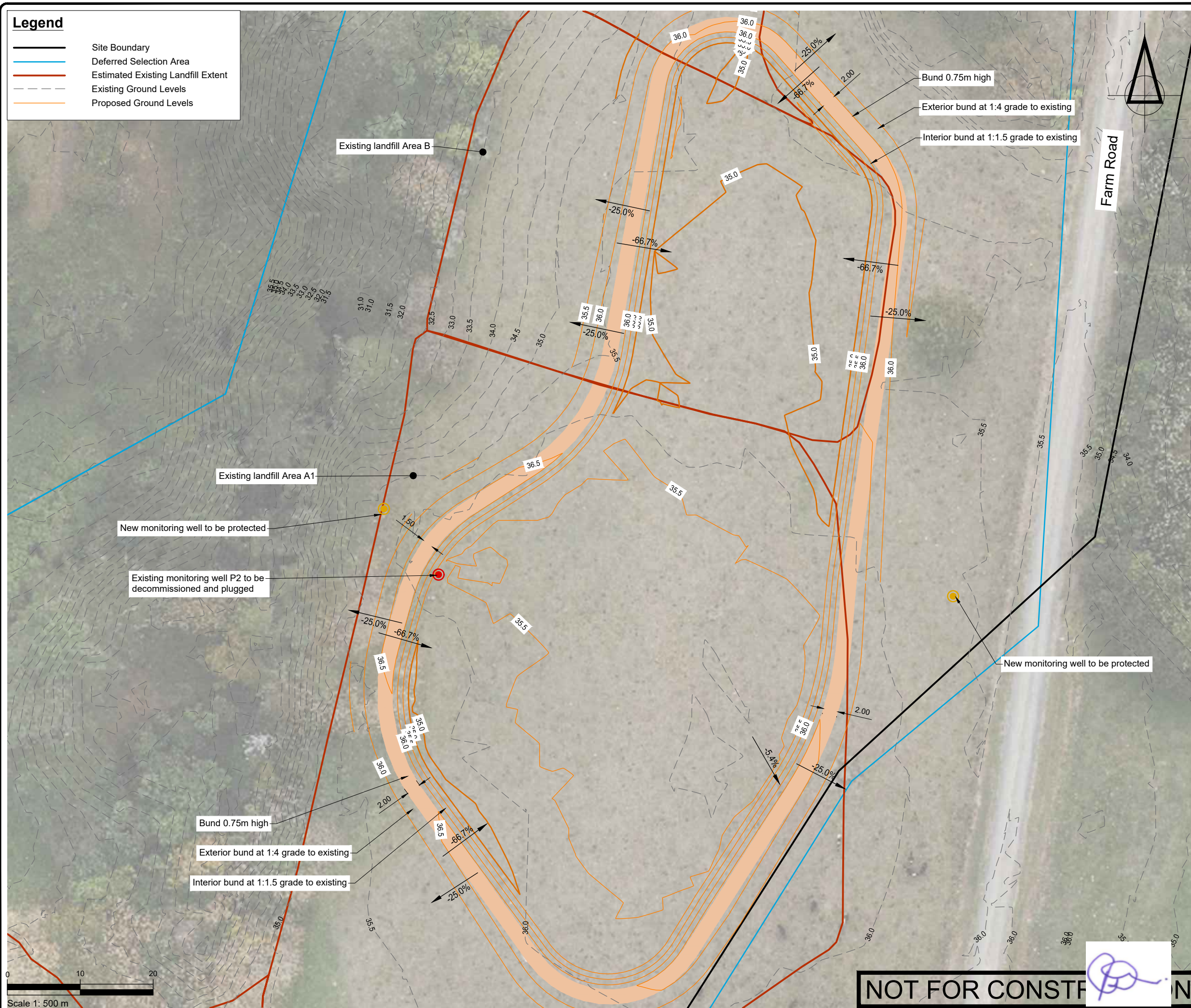
PROJECT
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DEMOLITION AND REMEDIATION
PROJECT

TITLE

PROPOSED SOUTHERN
DISPOSAL SITE CELL
PROPOSED TOE BUND 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.
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SCALE	1:250	(A3)
DRAWING No	33097/LF219	REVISION
		A

[illegible]

PROJECT DATUMS:	
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COORDINATE:	New Zealand Transverse Mercator

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TITLE

PROPOSED SOUTHERN
DISPOSAL SITE CELL
BASE OF CELL LEVELS PLAN



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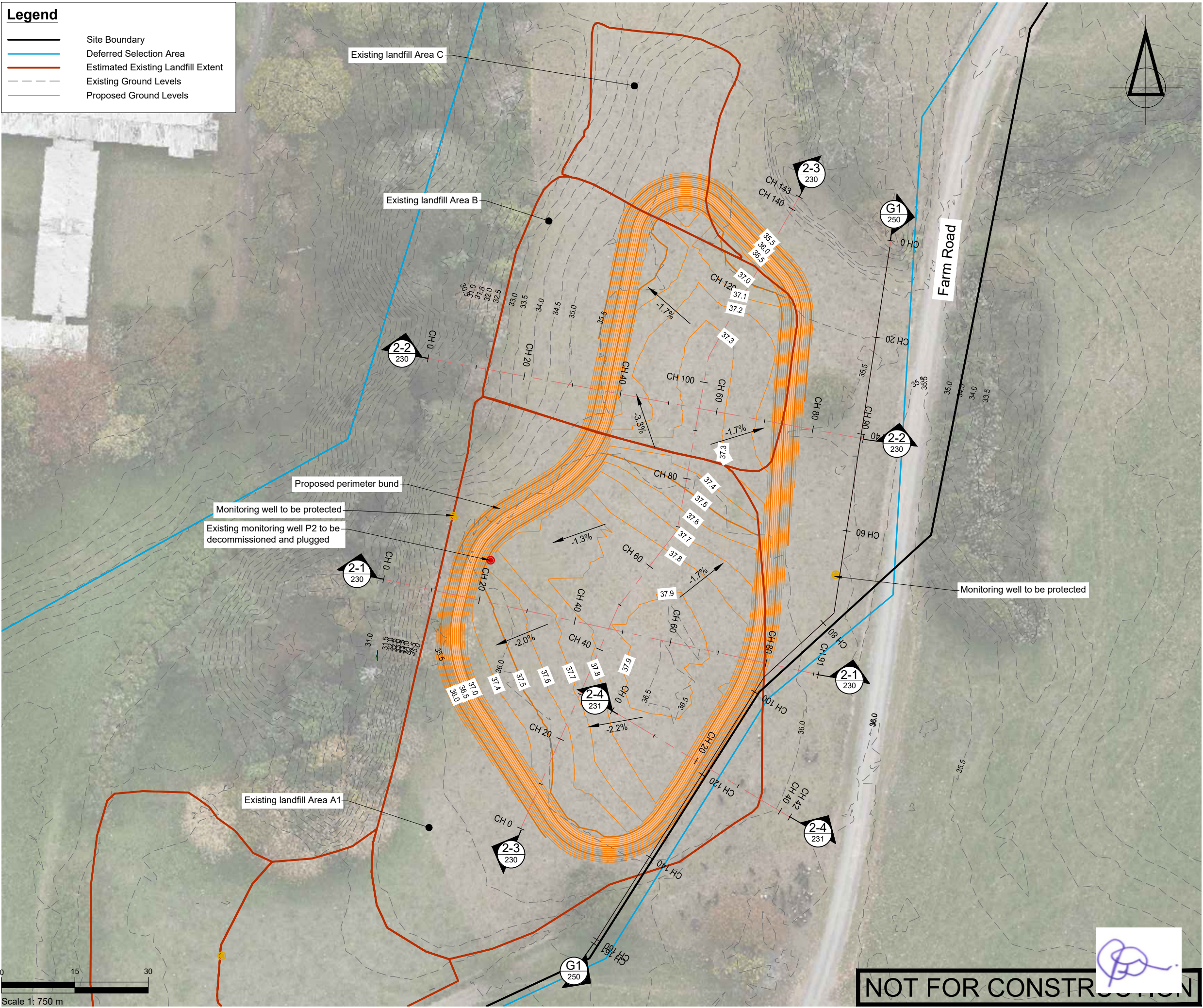
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SCALE	1:500 (A3)
DRAWING No	REVISION
33097/LF220	B

Legend

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



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NOTES

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



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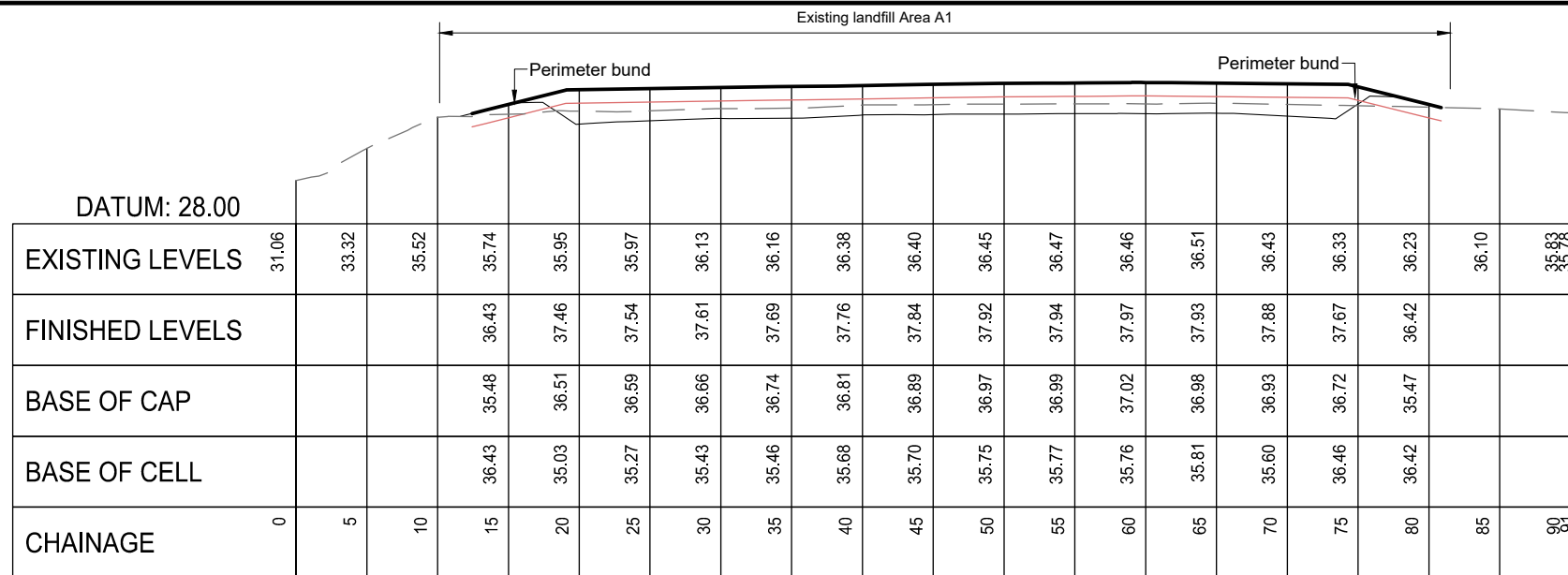
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DRAWING No 33097/LF221 REVISION B

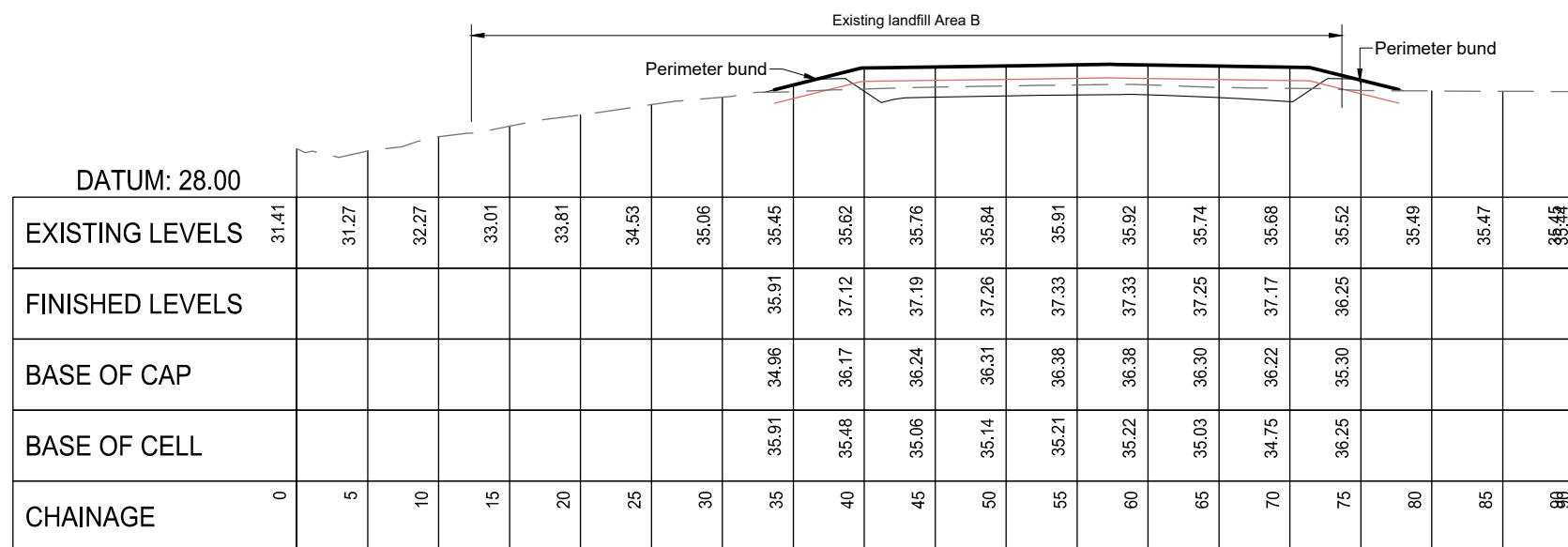
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Legend

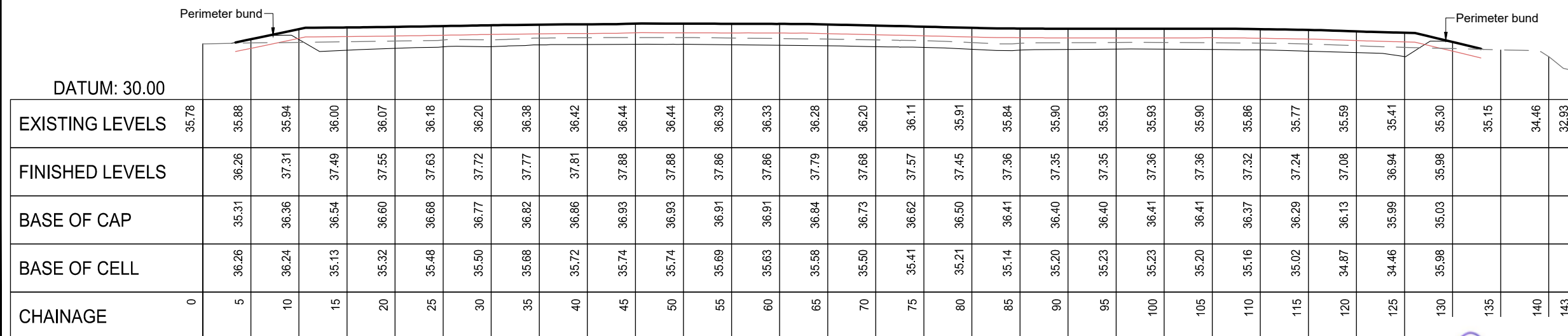
- Existing Ground
— Finished Ground
— Proposed Cap
— Proposed Cell Base



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



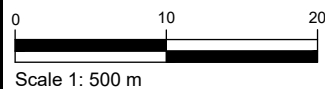
2-2 Cross Section 2-2
221 1:500



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

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B	COORDINATE SYSTEM CHANGED		SF	23/05/25

NOTES

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PROJECT

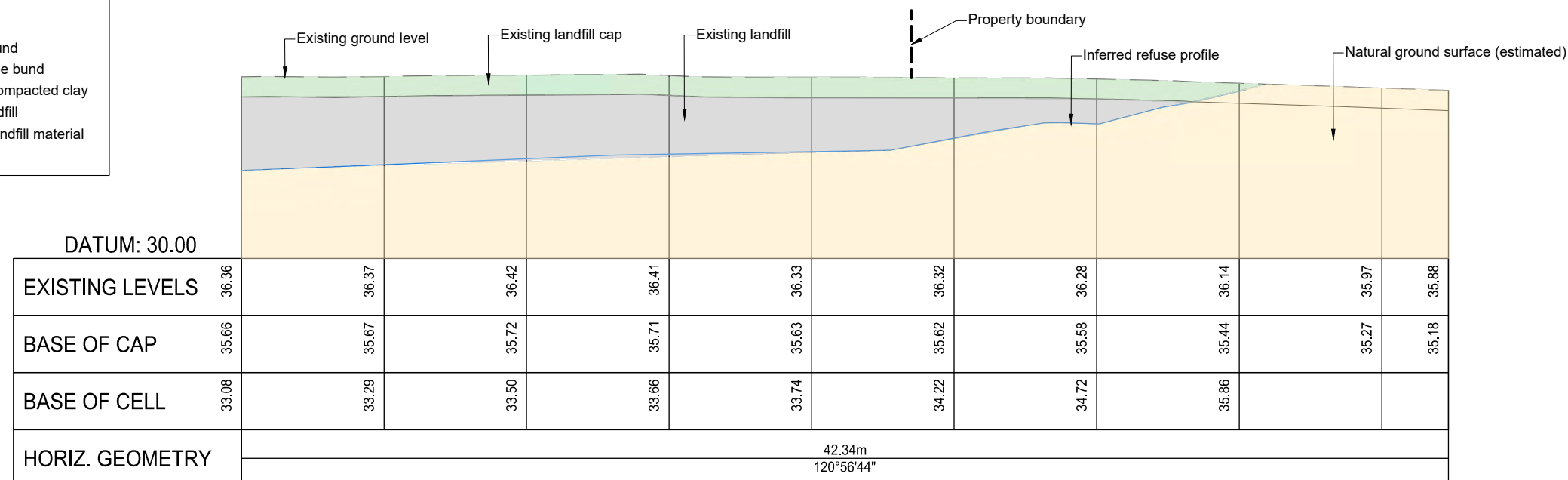
TITLE
PROPOSED SOUTHERN
DISPOSAL SITE CELL
CROSS SECTIONS SHEET 1

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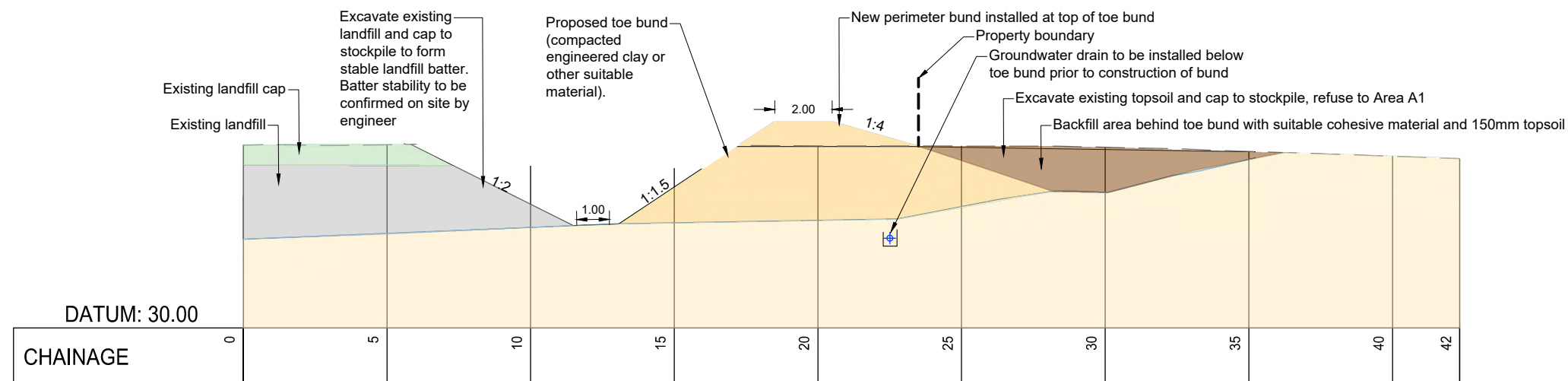
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DRAWING No 33097/LF230 REVISION B

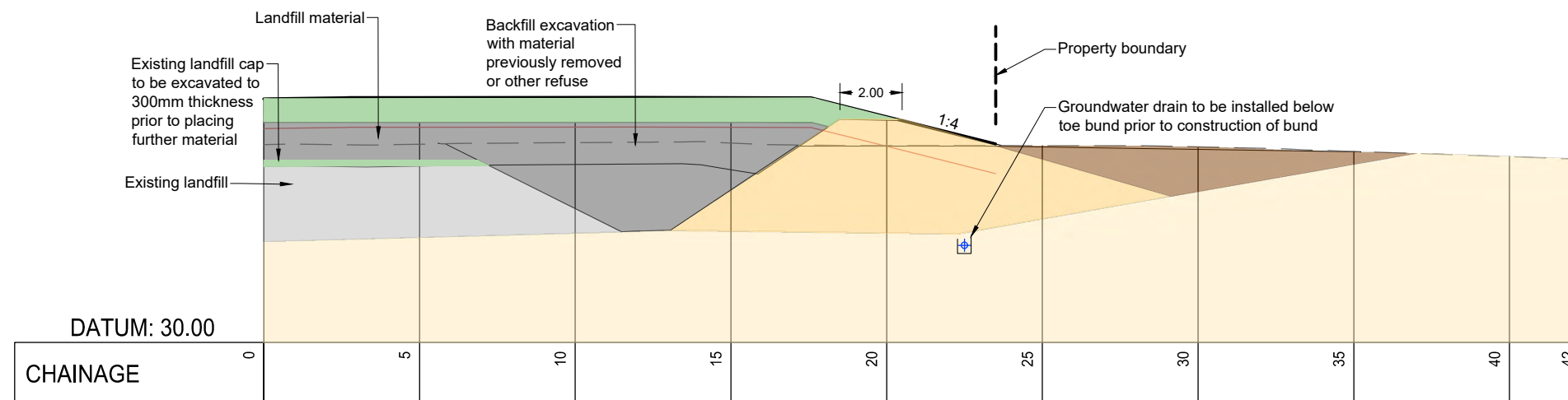
	Natural ground
	Proposed toe bund
	Proposed compacted clay
	Existing landfill
	Proposed landfill material
	Landfill cap



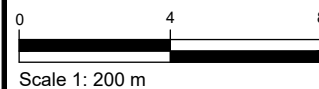
2-4 Cross Section 2-4 - Existing
221 1:200



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



2-4 Cross Section 2-4 - Stage 2



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NOTES

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DISPOSAL SITE CELL
CROSS SECTIONS SHEET 2



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SCALE 1:200 (A3)

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33097/LF231 A

Legend

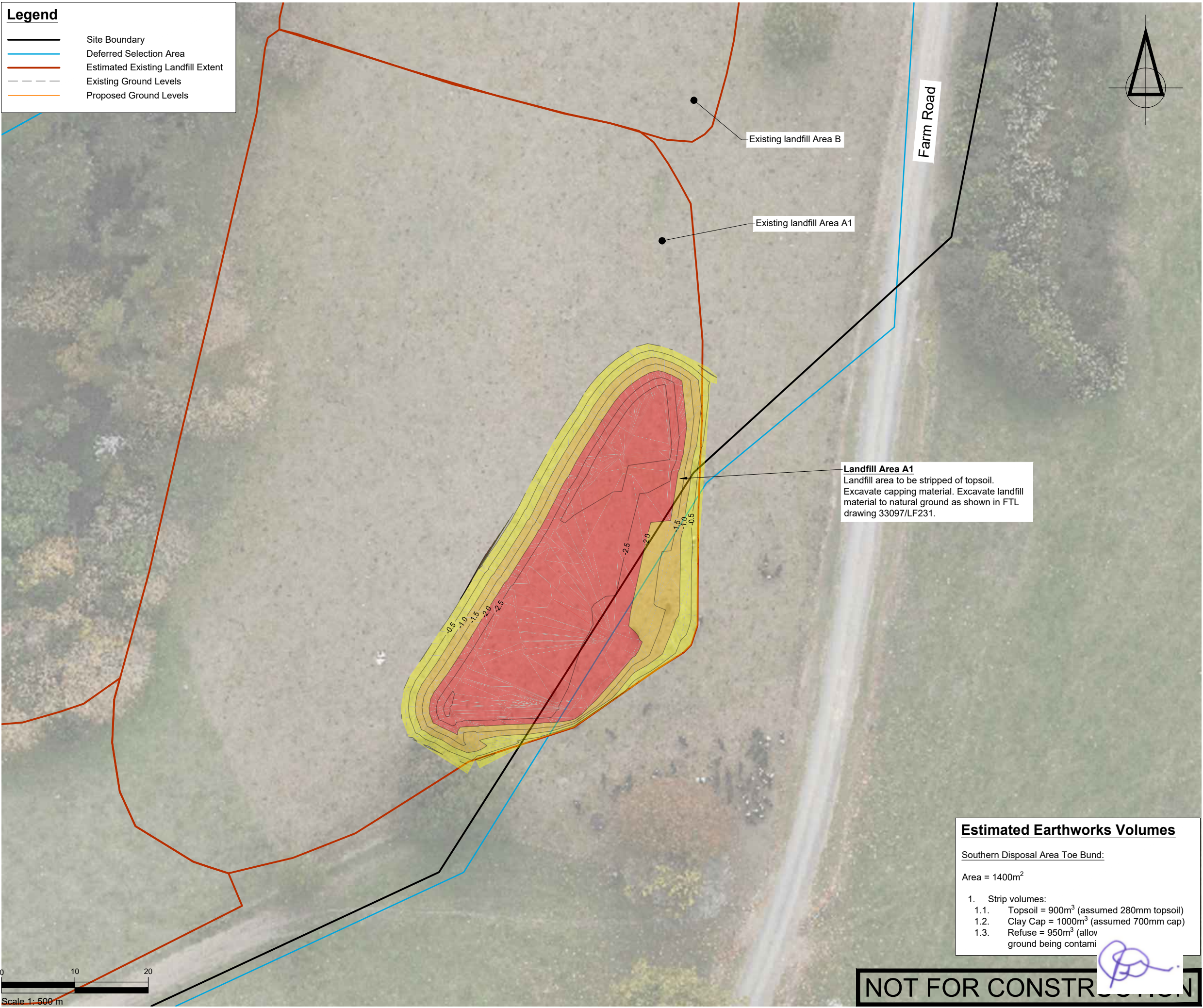
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

Proposed Ground Levels



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DESIGNED	TB	20/11/24			
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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

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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/LF238
REVISION	A

Estimated Earthworks Volumes

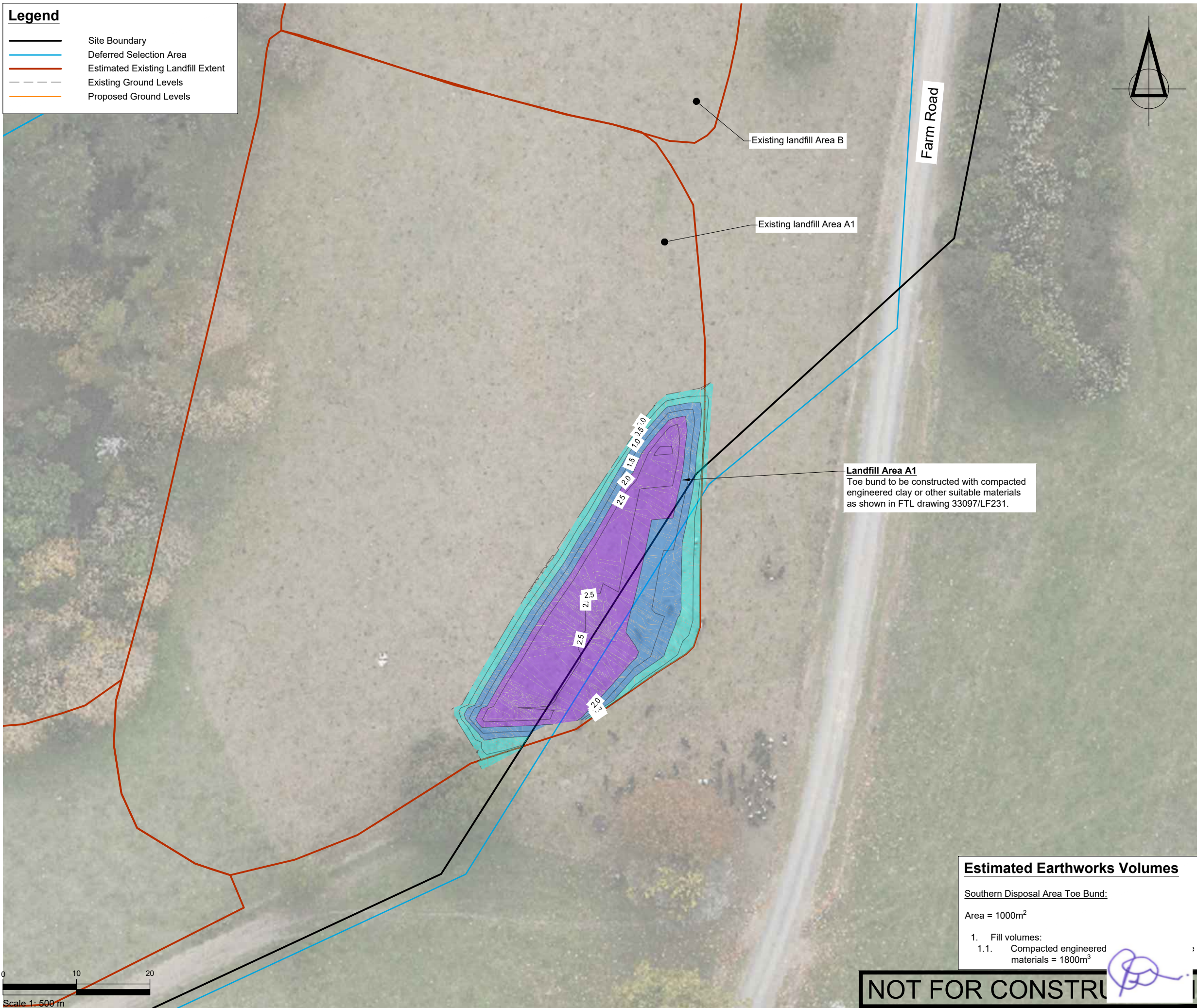
Southern Disposal Area Toe Bund:

Area = 1400m²

1. Strip volumes:
- 1.1. Topsoil = 900m³ (assumed 280mm topsoil)
- 1.2. Clay Cap = 1000m³ (assumed 700mm cap)
- 1.3. Refuse = 950m³ (allow ground being contami

NOT FOR CONSTRUCTION

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

[illegible][illegible]

PROJECT DATUMS:
 LEVEL: New Zealand Vertical Datum 2016
 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	09 278 7078
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SCALE	1:500 (A3)
DRAWING No	33097/LF239 REVISION A

P:\33 series\33097\03 Drawings\33097-LF239.dwg, ygoh, 20/8/2025 4:00 pm

Legend

Site Boundary

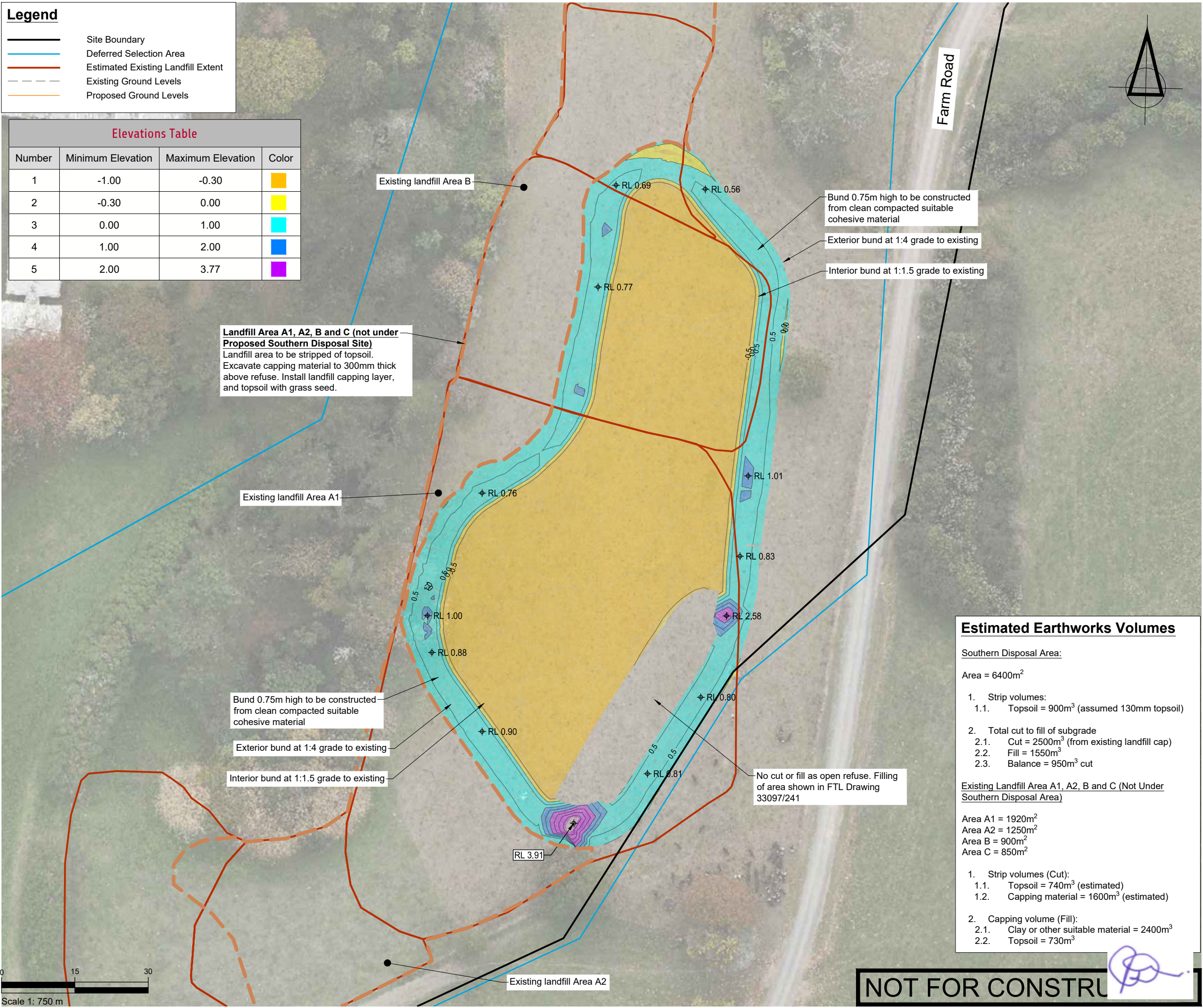
Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

Proposed Ground Levels

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-1.00	-0.30	
2	-0.30	0.00	
3	0.00	1.00	
4	1.00	2.00	
5	2.00	3.77	



Estimated Earthworks Volumes

- Southern Disposal Area:
- Area = 6400m²
- Strip volumes:
 - Topsoil = 900m³ (assumed 130mm topsoil)
 - Total cut to fill of subgrade
 - Cut = 2500m³ (from existing landfill cap)
 - Fill = 1550m³
 - Balance = 950m³ cut
- Existing Landfill Area A1, A2, B and C (Not Under Southern Disposal Area)
- Area A1 = 1920m²
Area A2 = 1250m²
Area B = 900m²
Area C = 850m²
- Strip volumes (Cut):
 - Topsoil = 740m³ (estimated)
 - Capping material = 1600m³ (estimated)
 - Capping volume (Fill):
 - Clay or other suitable material = 2400m³
 - Topsoil = 730m³

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

CLIENT
TOITU TE WHENUA LAND
INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE
PROPOSED SOUTHERN
DISPOSAL SITE CELL
CELL FORMATION CUT AND FILL
PLAN

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SCALE 1:500 (A3)
DRAWING No 33097/LF240
REVISION B

Legend

Site Boundary

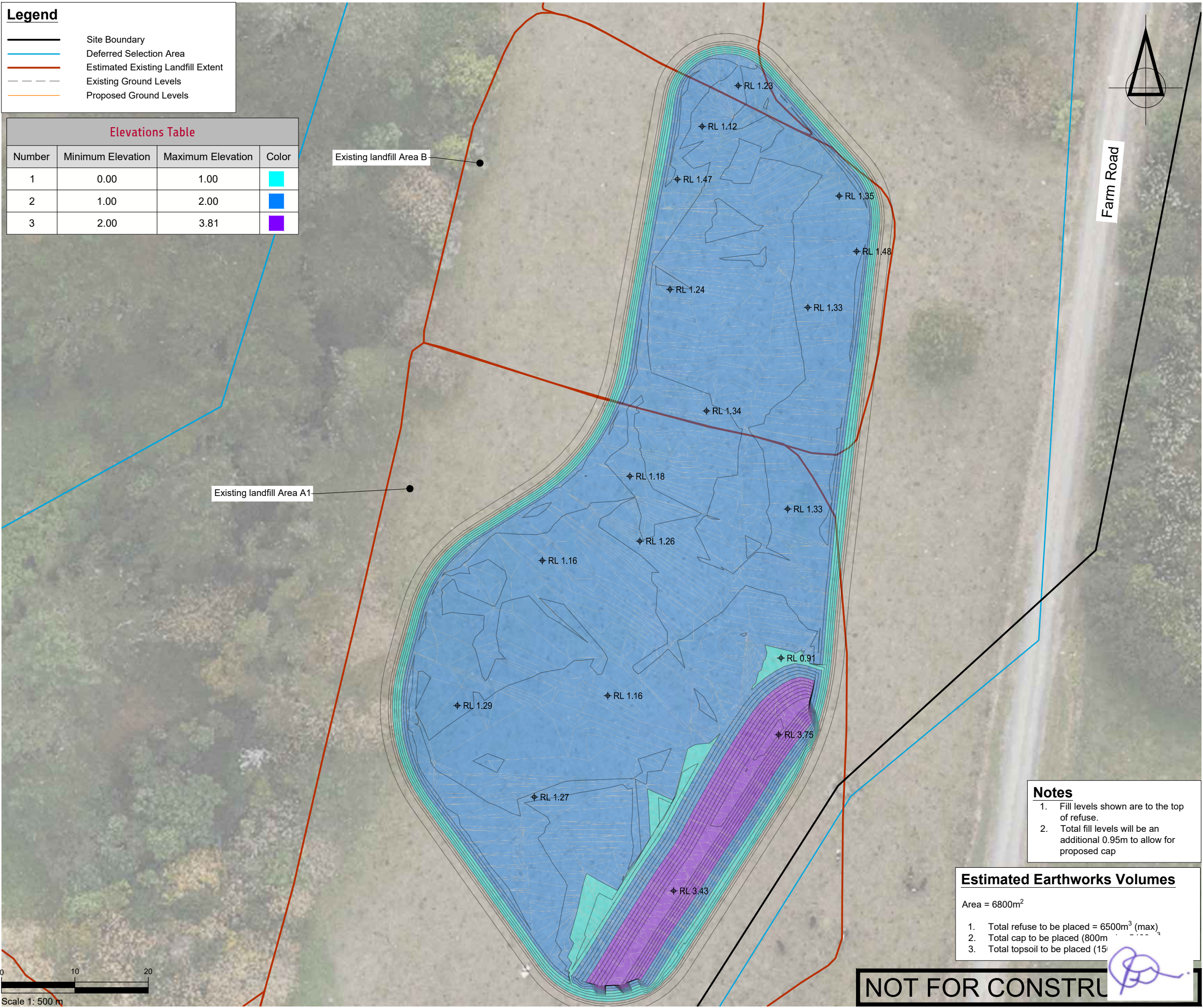
Deferred Selection Area

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	



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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SCALE

1:500

(A3)

DRAWING No

33097/LF241

REVISION

B

- 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 = 6800m²

1. Total refuse to be placed = 6500m³ (max)₂

2. Total cap to be placed (800m

3. Total topsoil to be placed (15

NOT FOR CONSTRUCTION



NOTES	

PROJECT DATUMS:

LEVEL: New Zealand Vertical Datum 2016

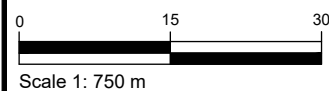
COORDINATE: New Zealand Transverse Mercator

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

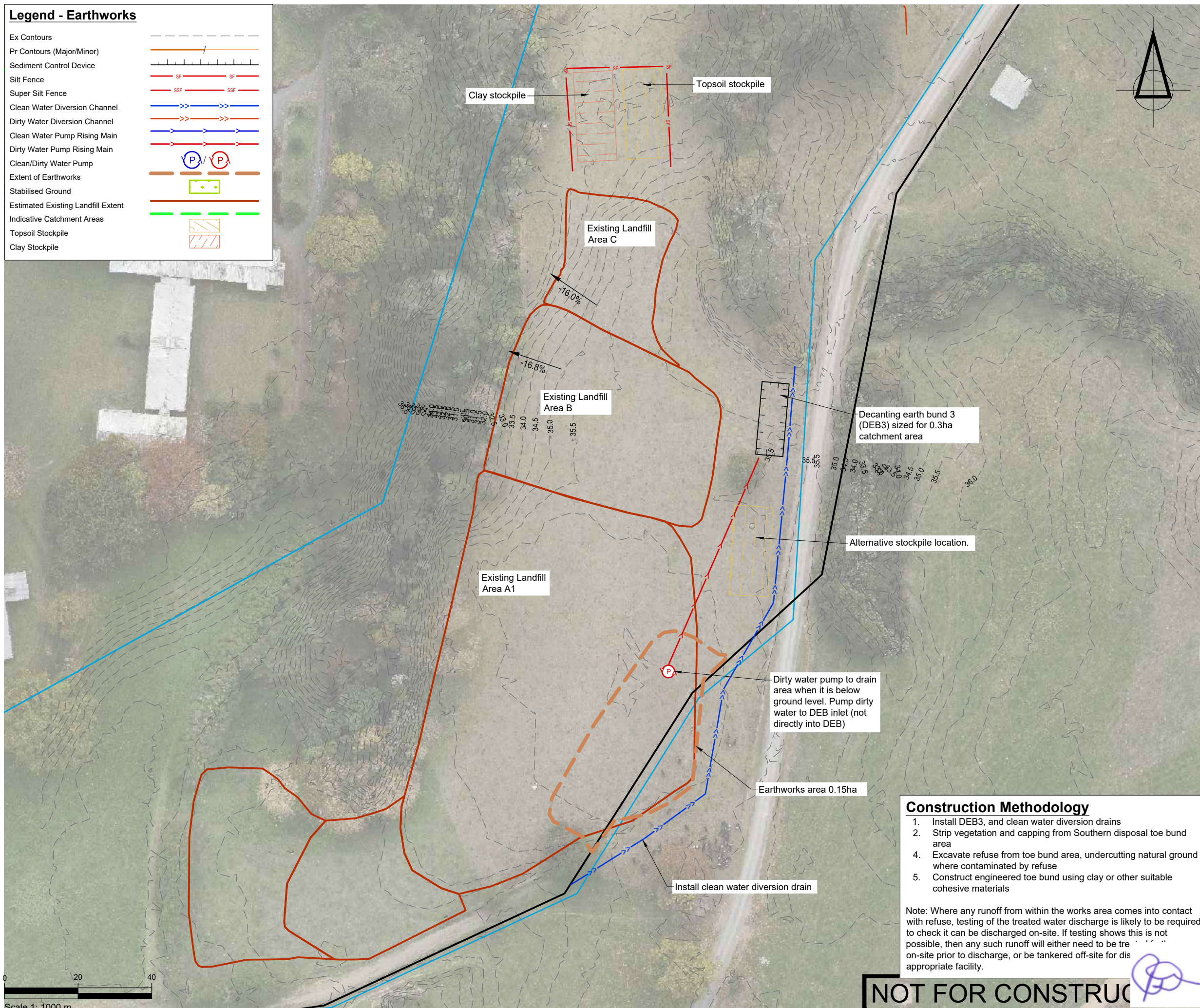
PROPOSED SOUTHERN
DISPOSAL SITE CELL
GROUNDWATER DRAIN LONG
SECTION AND DETAIL

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	AS SHOWN		(A3)
DRAWING No	33097/LF250		REVISION
	B		



NOT FOR CONSTRU

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

PROJECT

FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

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



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STATUS

STATUS

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SCALE 1:1000

3)

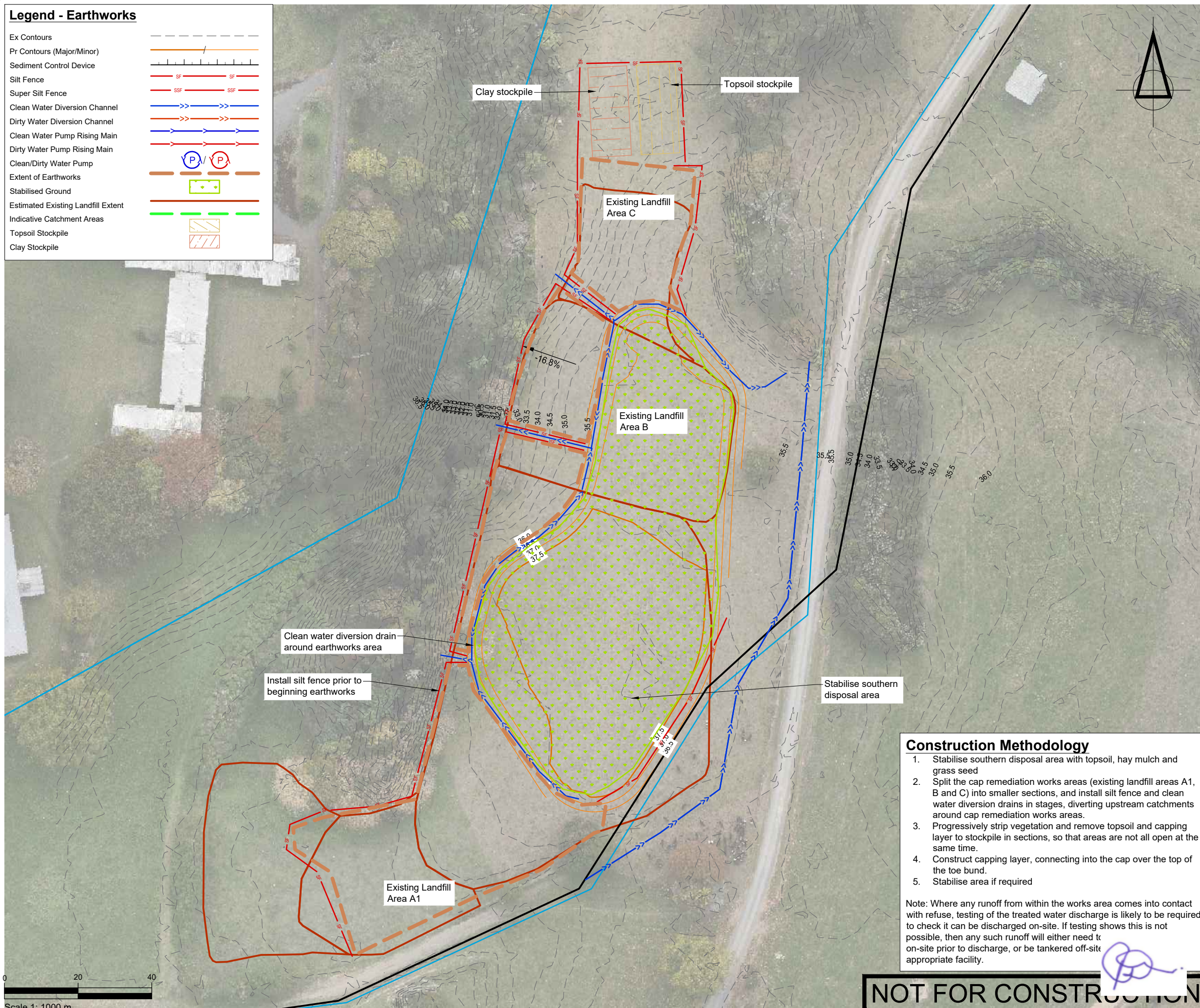
DRAWING No.

VISION

33097/LF289

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: 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 EROSION AND SEDIMENT CONTROL PLAN PHASE 2



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SCALE 1:1000

3)

DRAWING No.

REVISION

33097/LF291

3 L

Legend

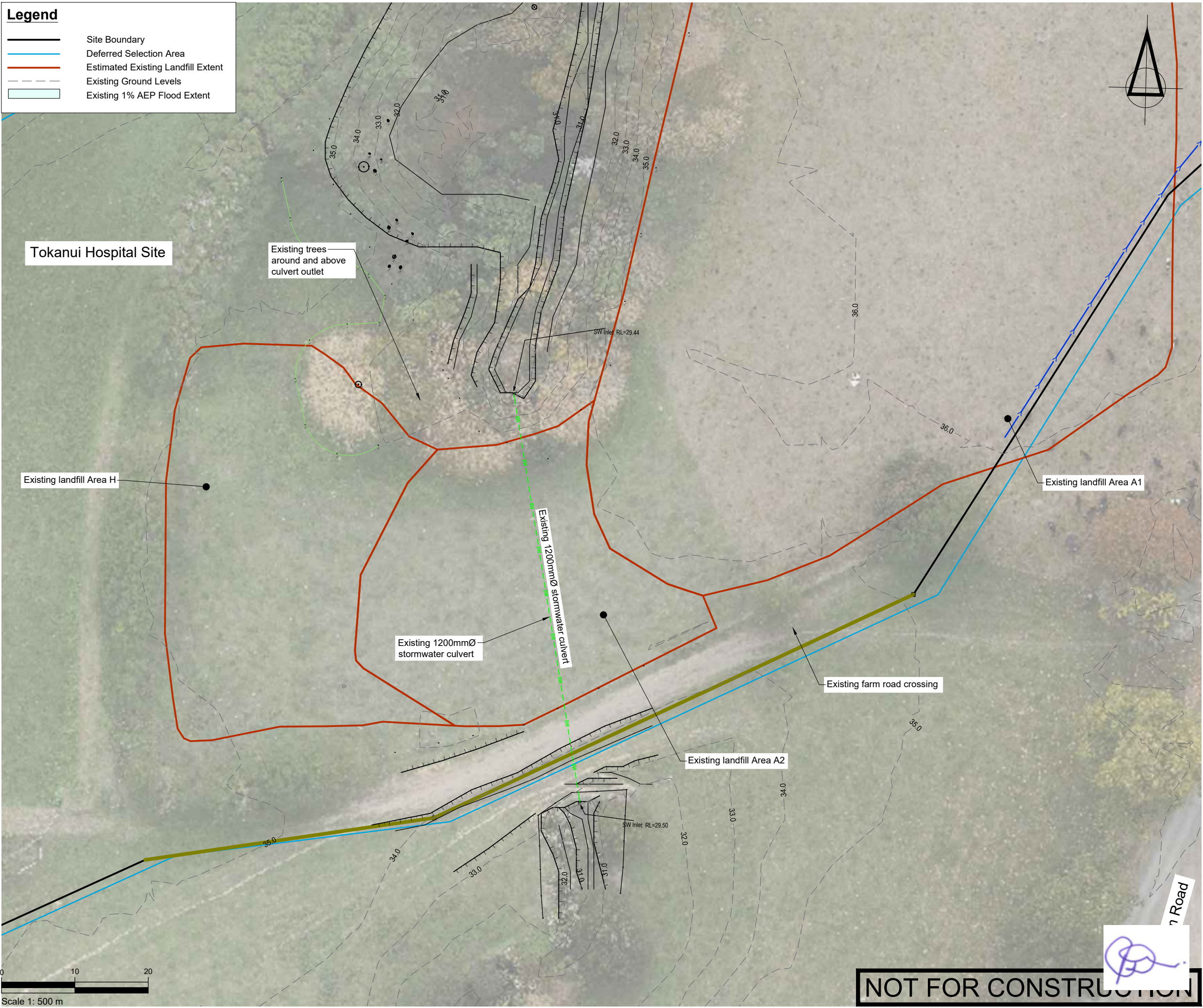
Site Boundary

Deferred Selection Area

Estimated Existing Landfill Extent

Existing Ground Levels

Existing 1% AEP Flood Extent



SURVEYED	TB	14/08/24	APPROVED	SF	DATE
DESIGNED	TB	15/08/24			
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

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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

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CHRISTCHURCH 03 358 5936
BLENHEIM 03 428 3292
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SCALE 1:500 (A3)

DRAWING No 33097/LF300 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

Tokanui Hospital Site

Existing landfill Area H

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

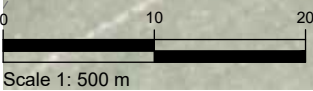
Existing landfill Area A1

Existing landfill Area A2

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

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.



NOT FOR CONSTRUCTION

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

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
PROPOSED FINAL DESIGN PLAN

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STATUS FOR RESOURCE CONSENT	
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SCALE 1:500	(A3)
DRAWING No 33097/LF310	REVISION D

Legend

Site Boundary

Deferred Selection Area

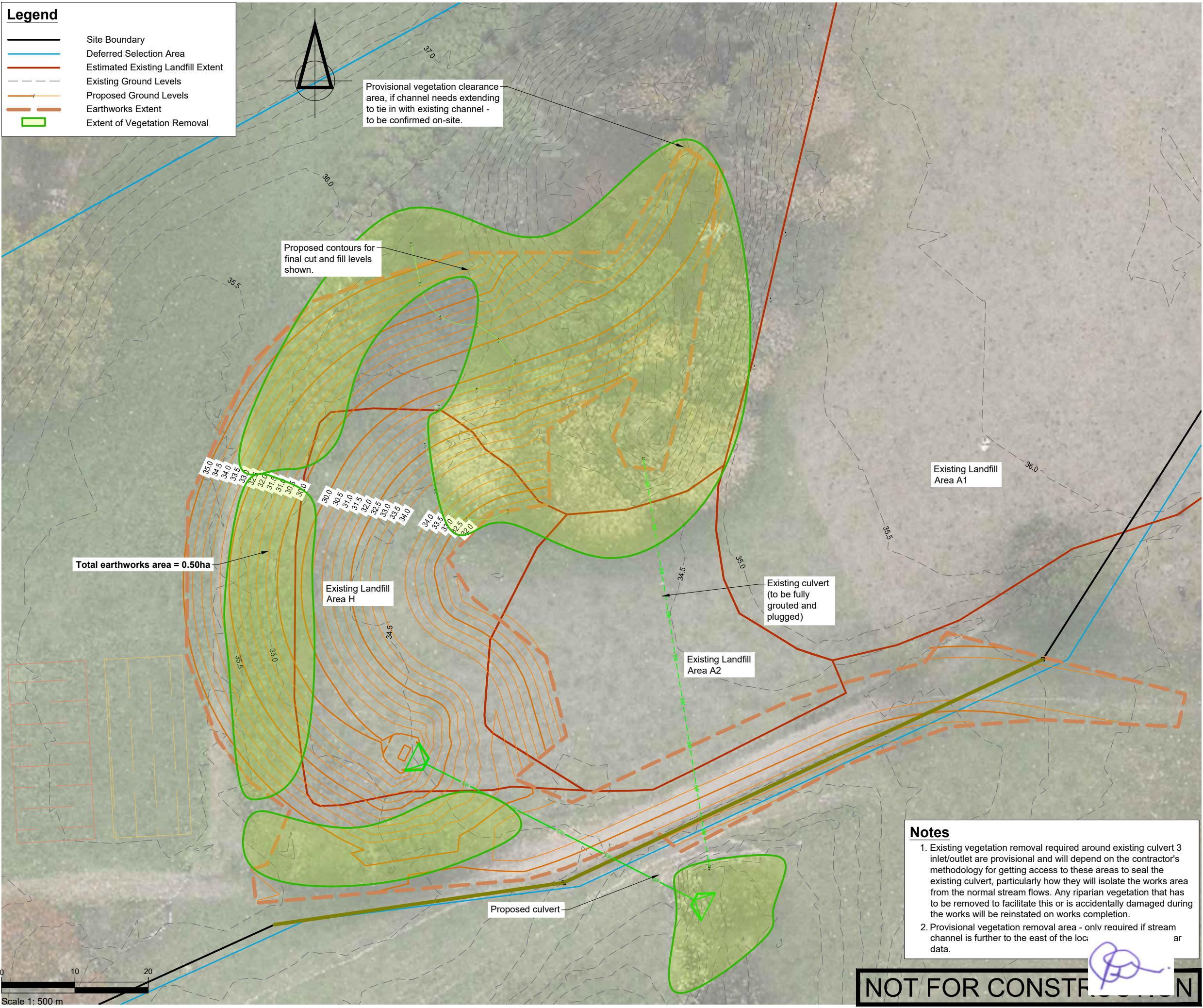
Estimated Existing Landfill Extent

Existing Ground Levels

Proposed Ground Levels

Earthworks Extent

Extent of Vegetation Removal



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:
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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
INDICATIVE VEGETATION
REMOVAL PLAN

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Notes

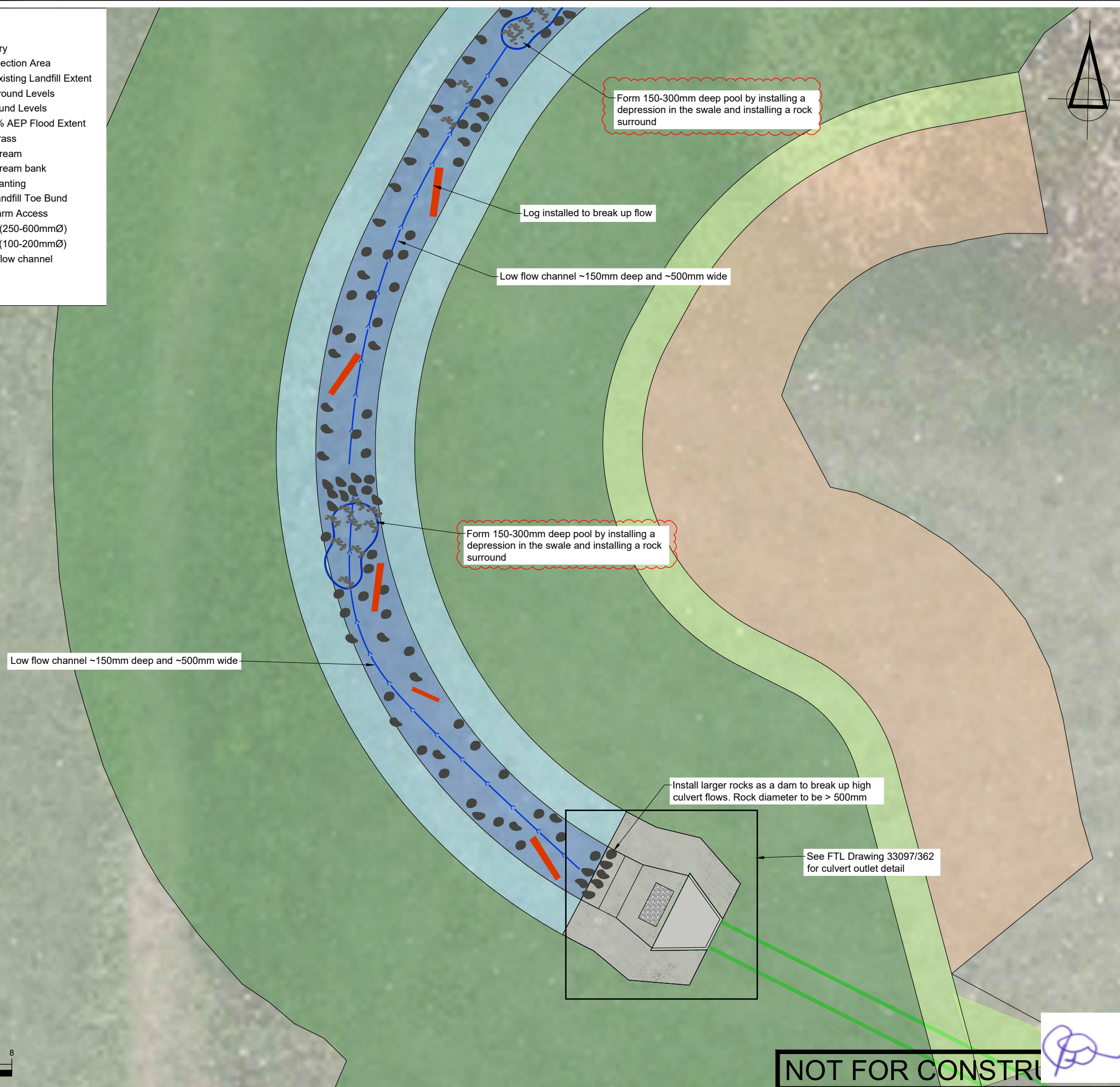
1. Existing vegetation removal required around existing culvert 3 inlet/outlet are provisional and will depend on the contractor's methodology for getting access to these areas to seal the existing culvert, particularly how they will isolate the works area from the normal stream flows. Any riparian vegetation 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 loc: ar

NOT FOR CONSTRUCTION

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 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]

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

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

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

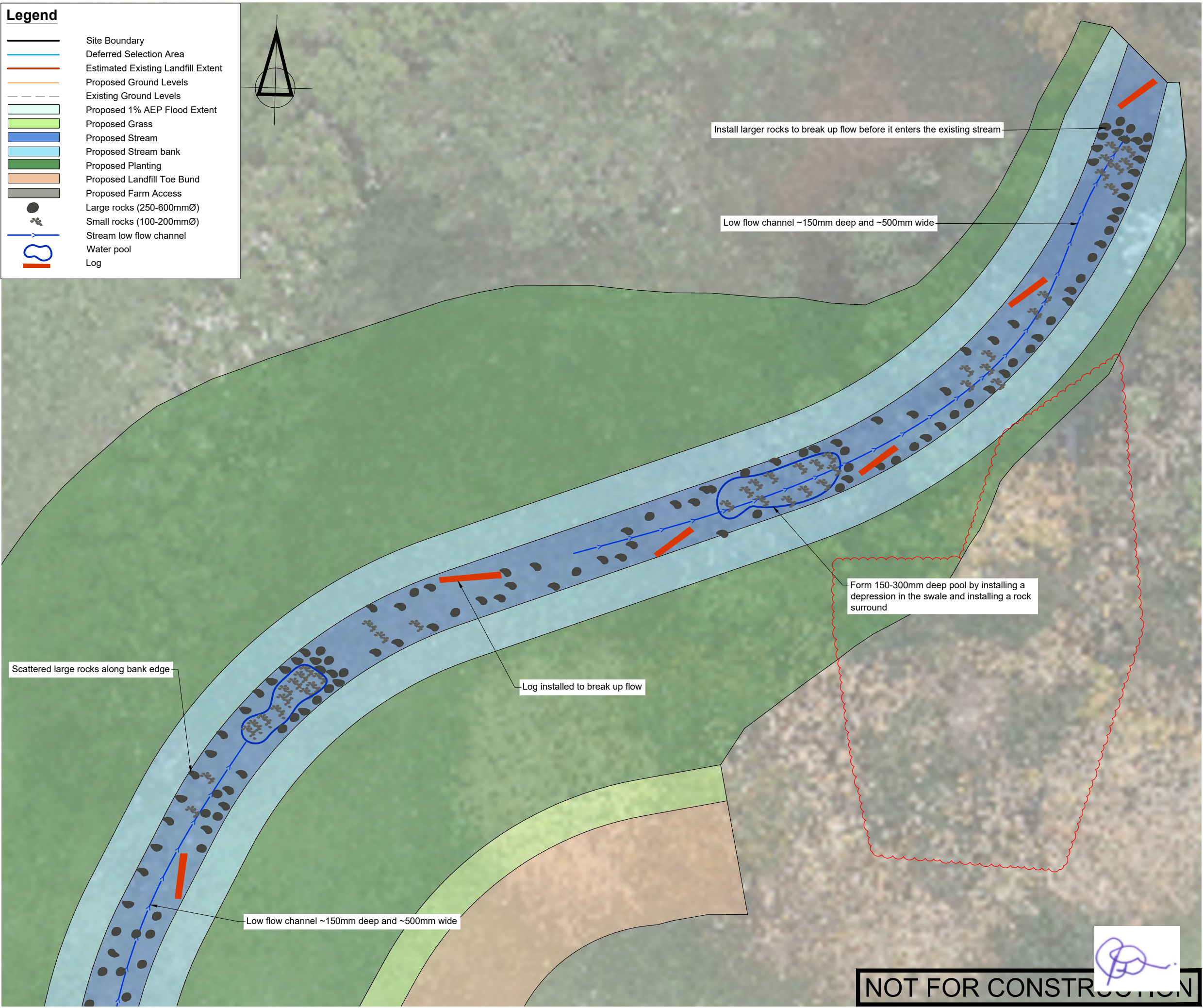
Large rocks (250-600mmØ)

Small rocks (100-200mmØ)

Stream low flow channel

Water pool

Log



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

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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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STATUS

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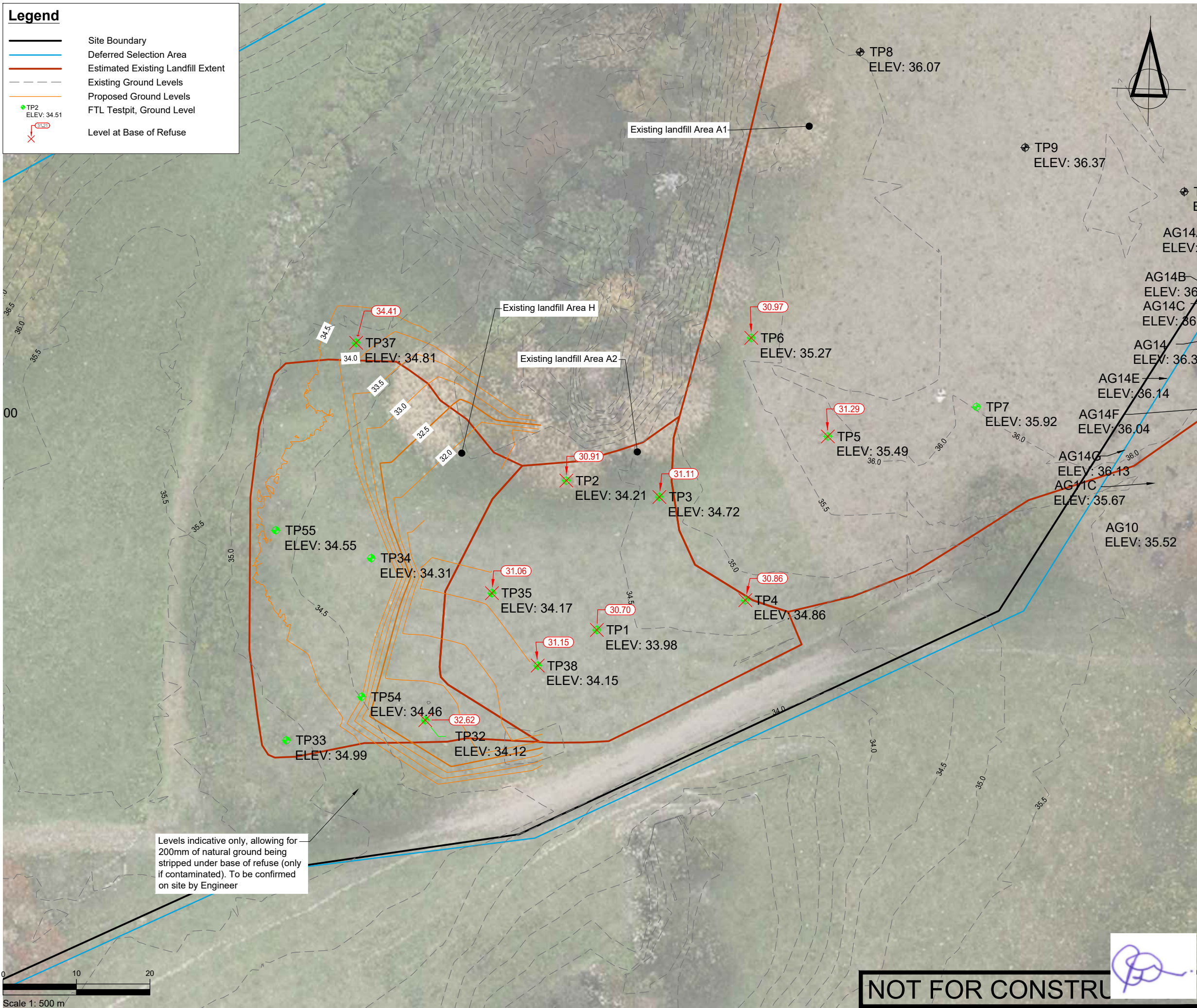
Construction works shall commence only on receipt of and in accordance with the Council or Council organisation stamped approved drawings, unless otherwise indicated.

SCALE 1:200 (A3)

DRAWING No 33097/LF313

REVISION A

Site Boundary
 Deferred Selection Area
 Estimated Existing Landfill Extent
 Existing Ground Levels
 Proposed Ground Levels
 FTL Testpit, Ground Level
 Level at Base of Refuse

[illegible]

NOTES

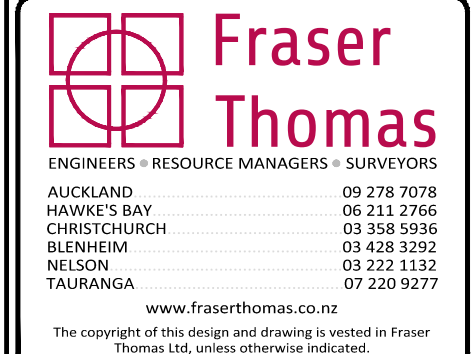
PROJECT DATUMS:
 LEVEL: New Zealand Vertical Datum 2016
 COORDINATE: New Zealand Transverse Mercator

TOITU TE WHENUA LAND INFORMATION NEW ZEALAND

PROJECT
FORMER TOKANUI HOSPITAL
DEMOLITION AND REMEDIATION
PROJECT

TITLE

AREAS A2/H & CULVERT 3
REFUSE UNDERCUT PLAN

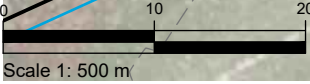
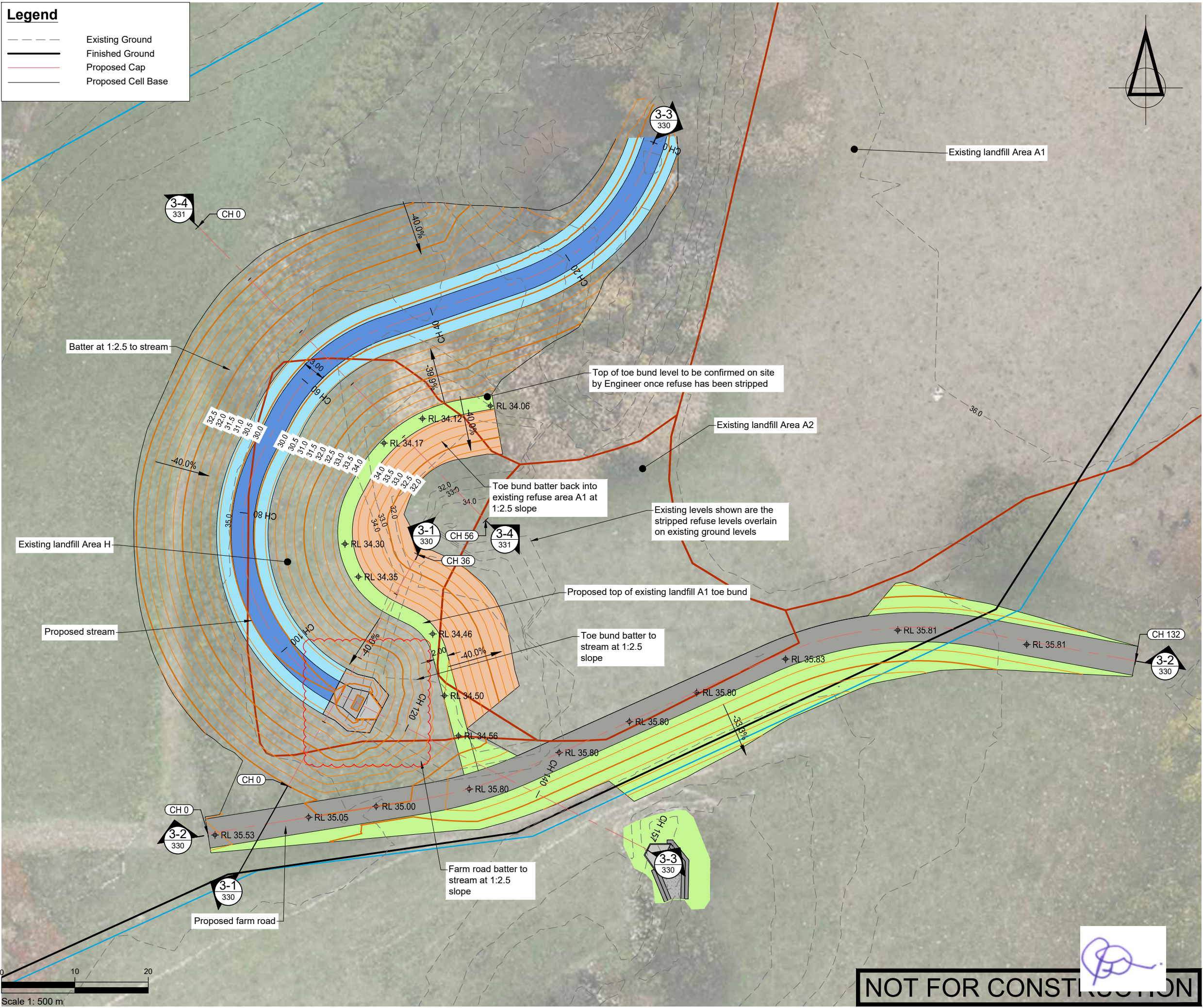


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SCALE	1:500	(A3)
DRAWING No	33097/LF320	REVISION
		A

Legend

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



NOT FOR CONSTRUCTION

SURVEYED	TB	14/08/24	APPROVED	SF	DATE
DRAWN	TB	21/08/24			
CHECKED	SF	05/11/24			
REVISION	CHANGES			CHECKED	DATE
A	AREA A2/H REDESIGN			SF	23/05/25
B	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
**AREAS A2/H & CULVERT 3
FINISHED LEVELS PLAN**



**Fraser
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SCALE 1:500 (A3)

DRAWING No 33097/LF321 REVISION B

P:\33 series\33097\03 Drawings\33097-LF321-LF330-LF331.dwg, 20/8/2025 4:01 pm

Legend

Natural ground

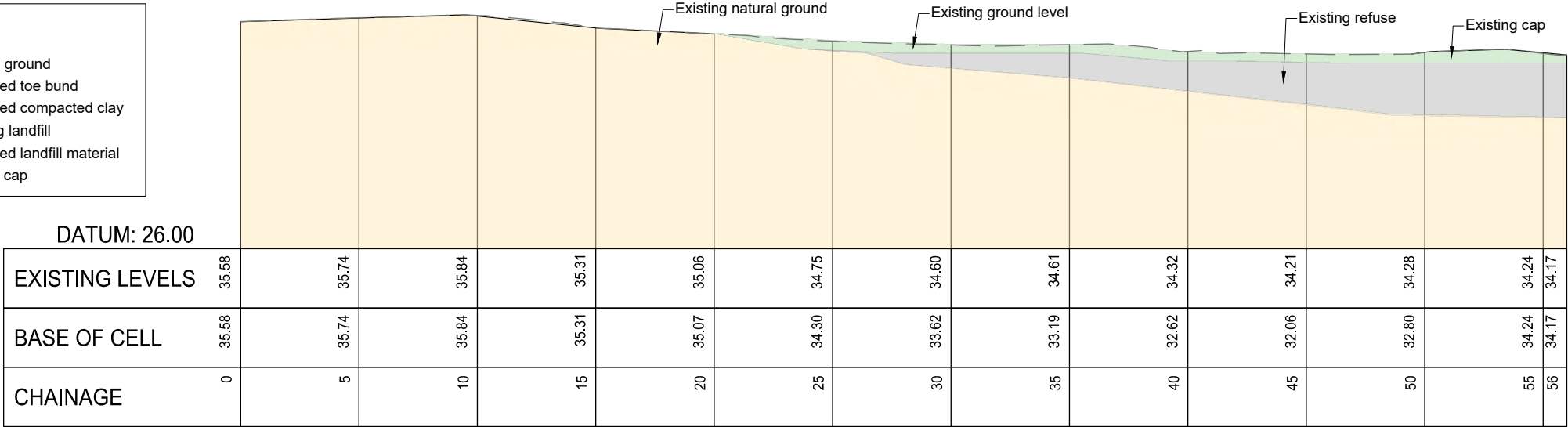
Proposed toe bund

Proposed compacted clay

Existing landfill

Proposed landfill material

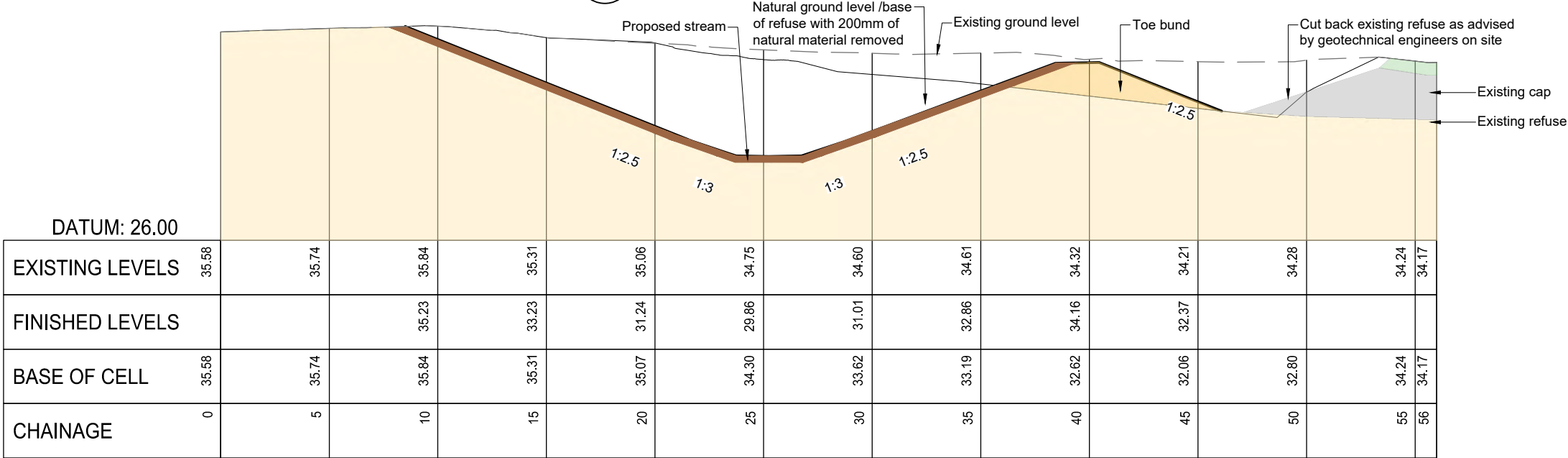
Landfill cap



3-4 Cross Section 3-4 - Existing

321

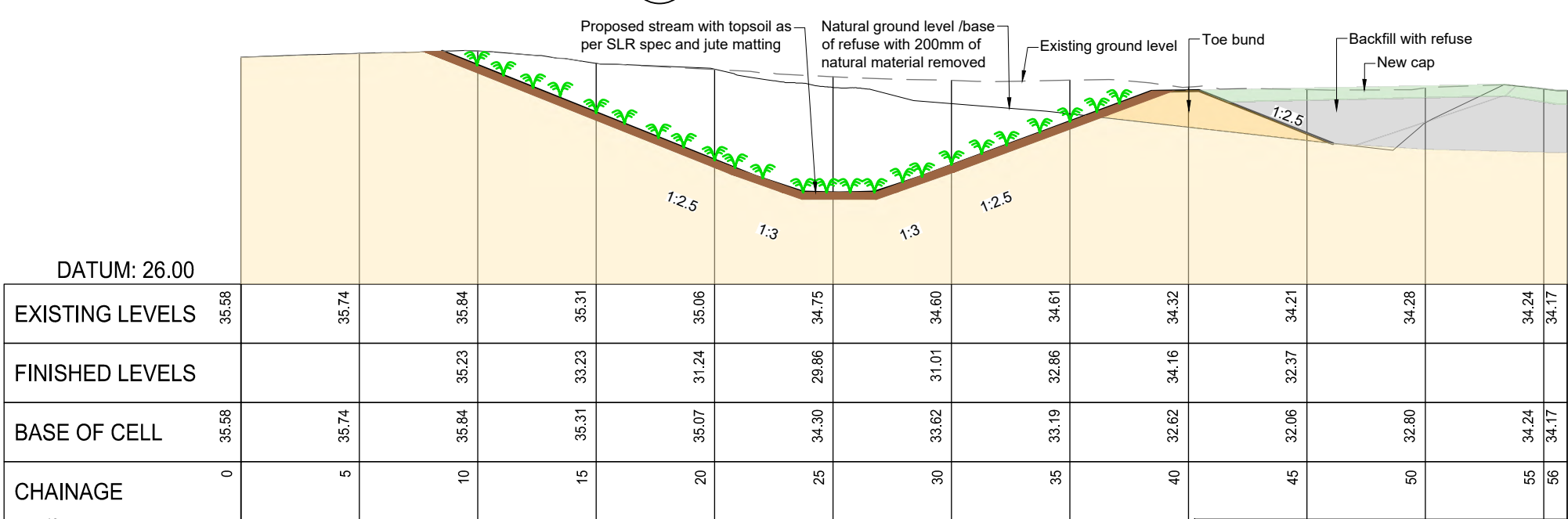
1:250



3-4 Cross Section 3-4 - Existing

321

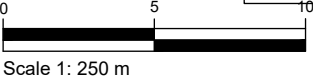
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3-4 Cross Section 3-4 - Existing

321

1:250



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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
CROSS SECTION PLAN 2

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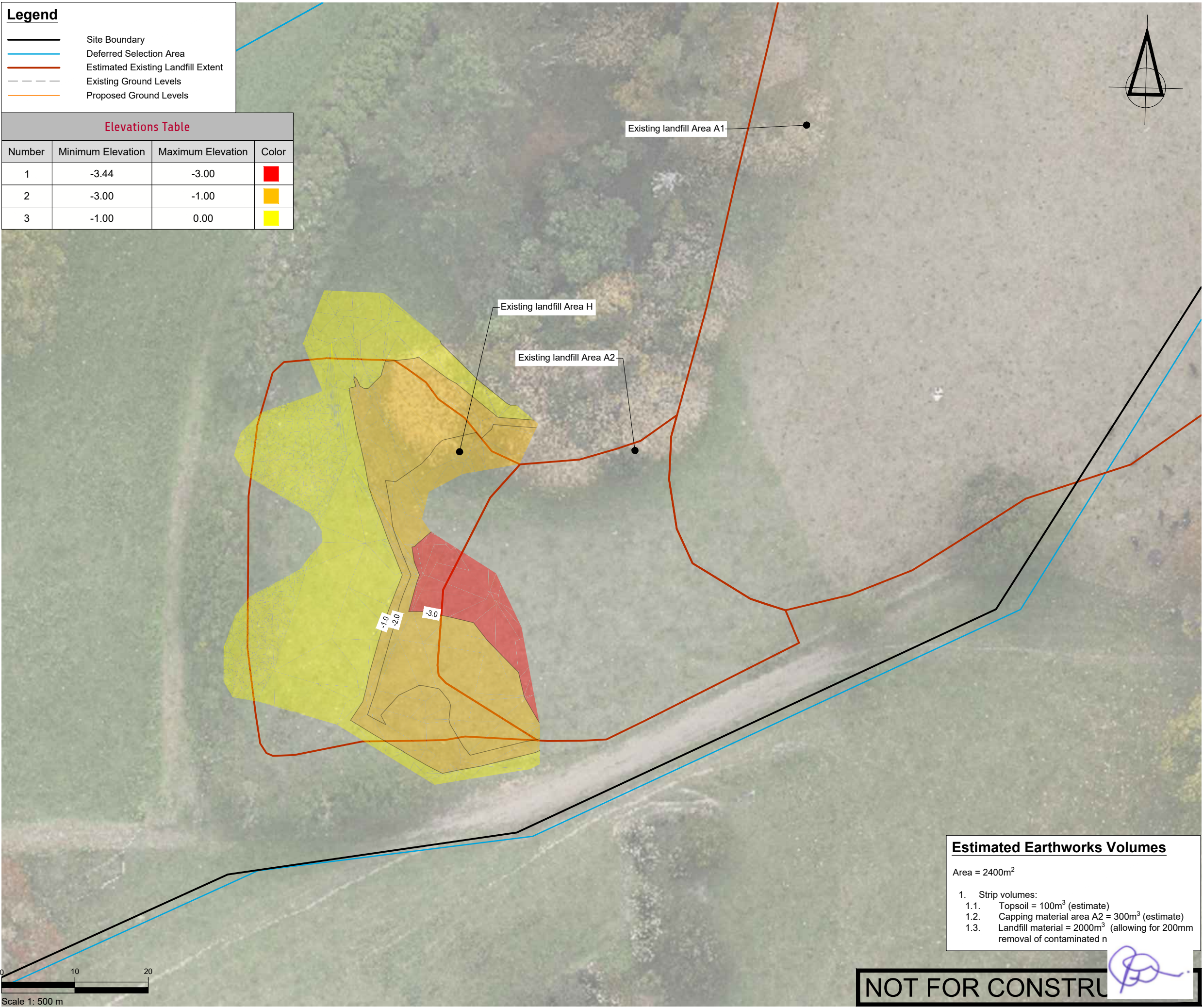
DRAWING No 33097/LF331

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	Red
2	-3.00	-1.00	Orange
3	-1.00	0.00	Yellow



Existing landfill Area A1

Existing landfill Area H

Existing landfill Area A2

-1.0
-2.0
-3.0

Estimated Earthworks Volumes

- Area = 2400m²
- Strip volumes:
 - Topsoil = 100m³ (estimate)
 - Capping material area A2 = 300m³ (estimate)
 - Landfill material = 2000m³ (allowing for 200mm removal of contaminated n

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NOTES

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PROJECT
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TITLE
AREAS A2/H & CULVERT 3
UNDERCUT STRIP PLAN

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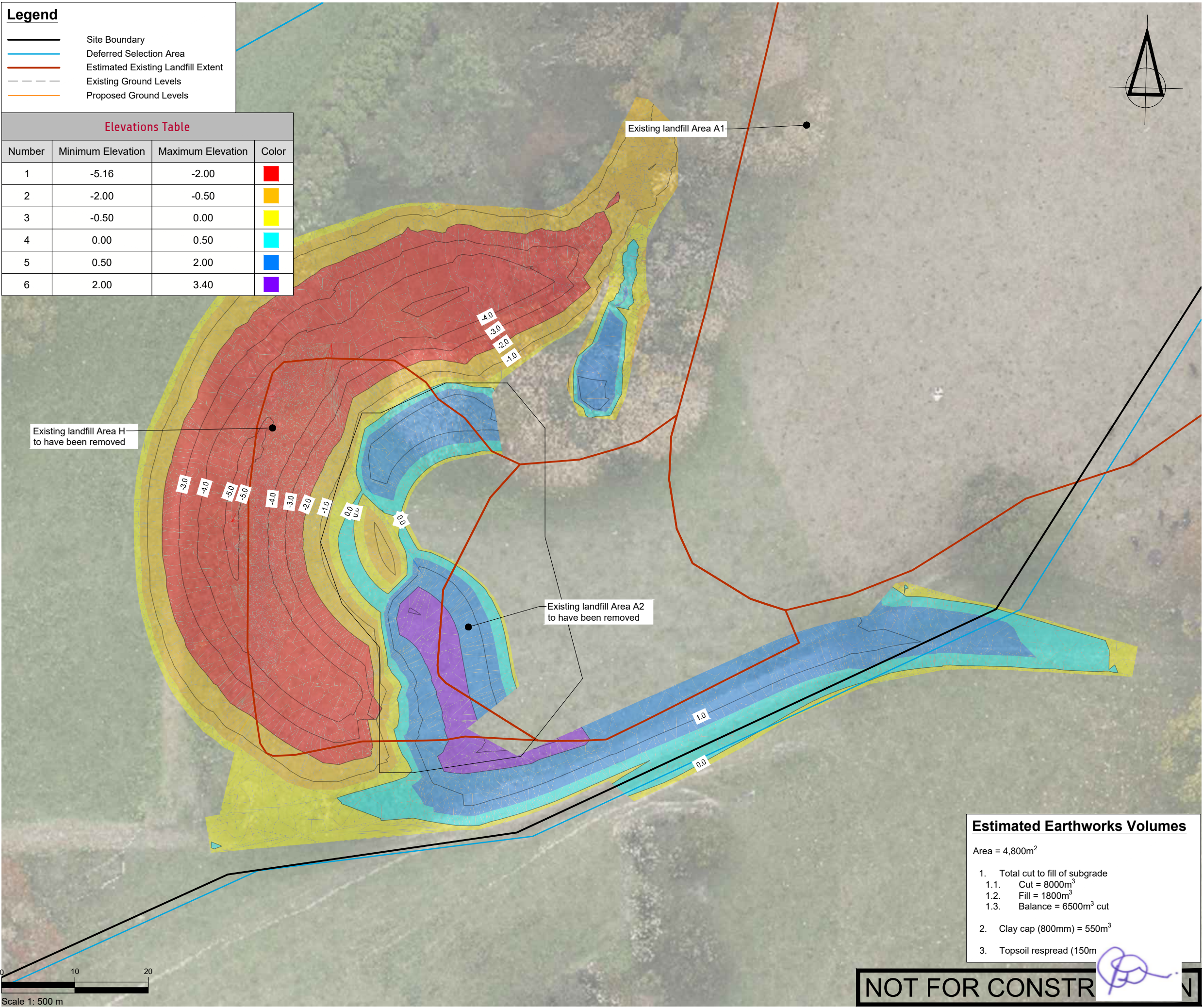
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SCALE	1:500	(A3)
DRAWING No	33097/LF340	REVISION
		A

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 (150m

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REVISION	CHANGES			CHECKED	DATE
A	AREA A2/H REDESIGN			SF	23/05/25

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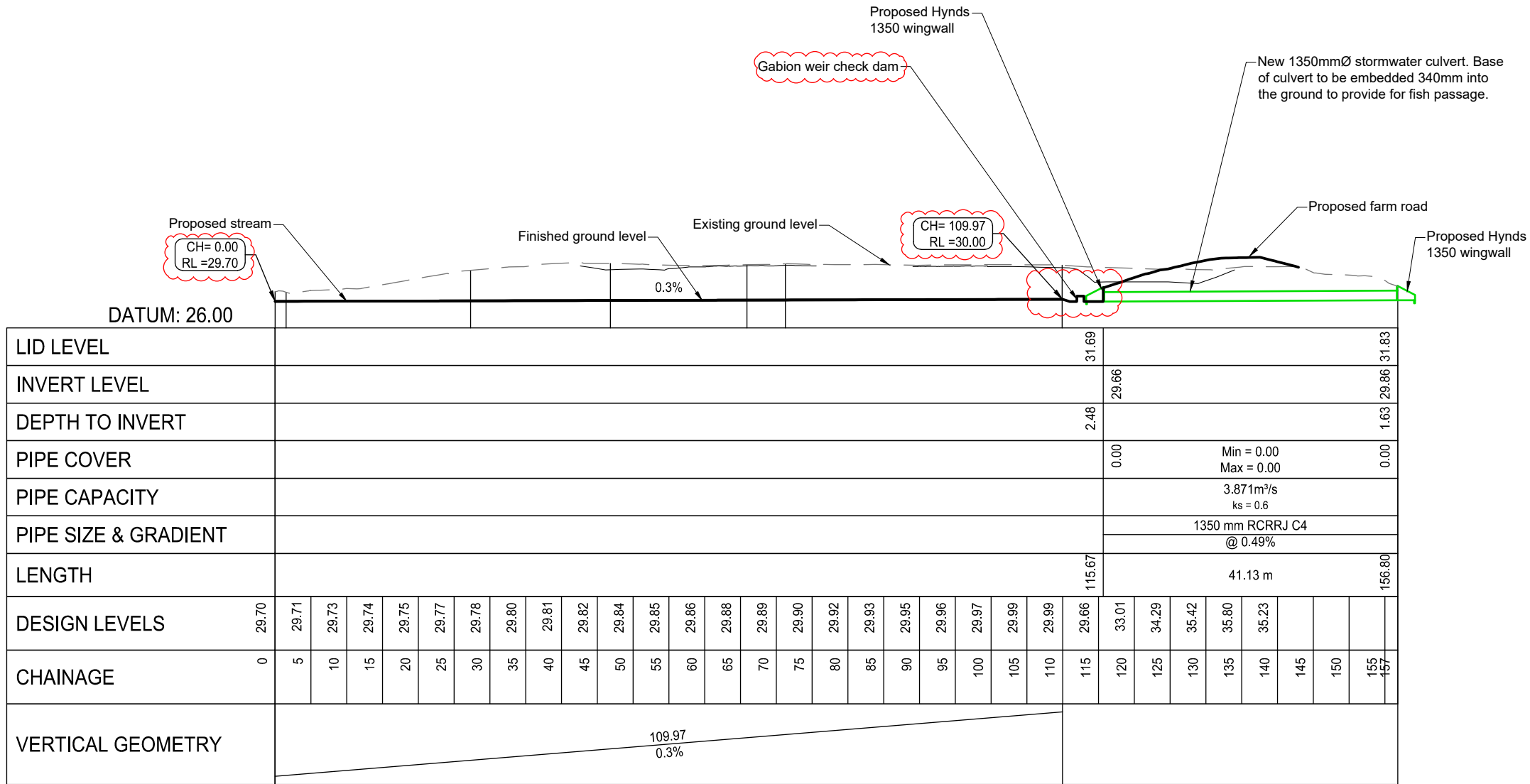
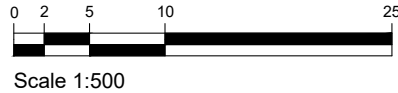
TITLE
AREAS A2/H & CULVERT 3
FINAL LEVELS CUT AND FILL
PLAN

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REVISION A

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L1 Stormwater Long Section 1
360 1:750

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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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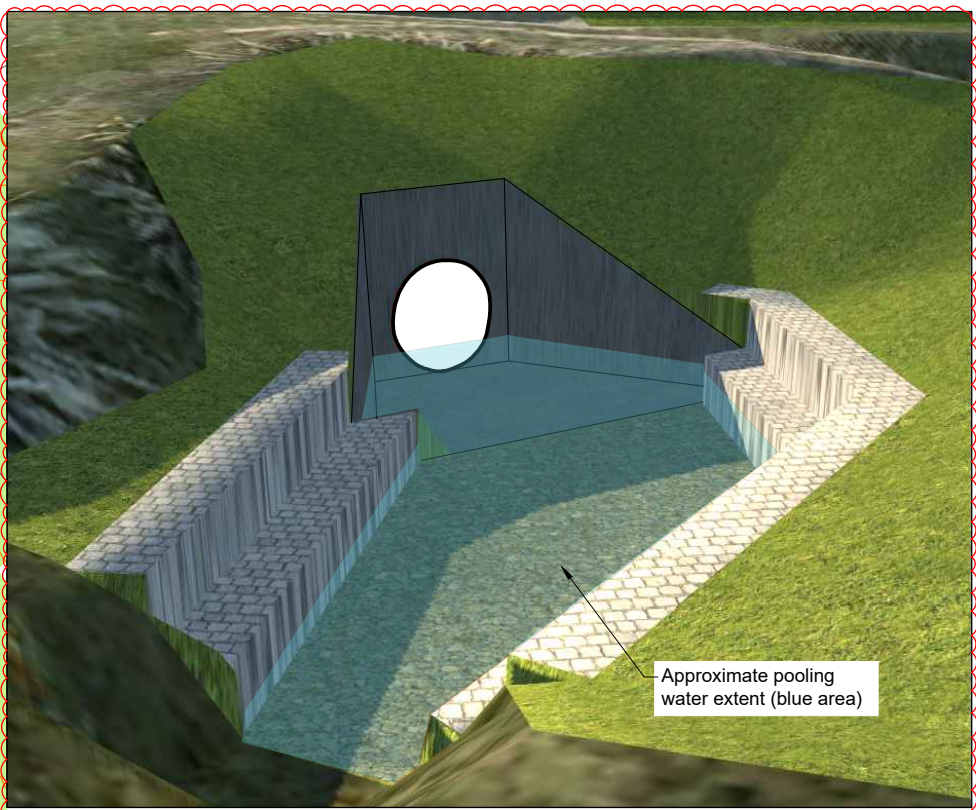
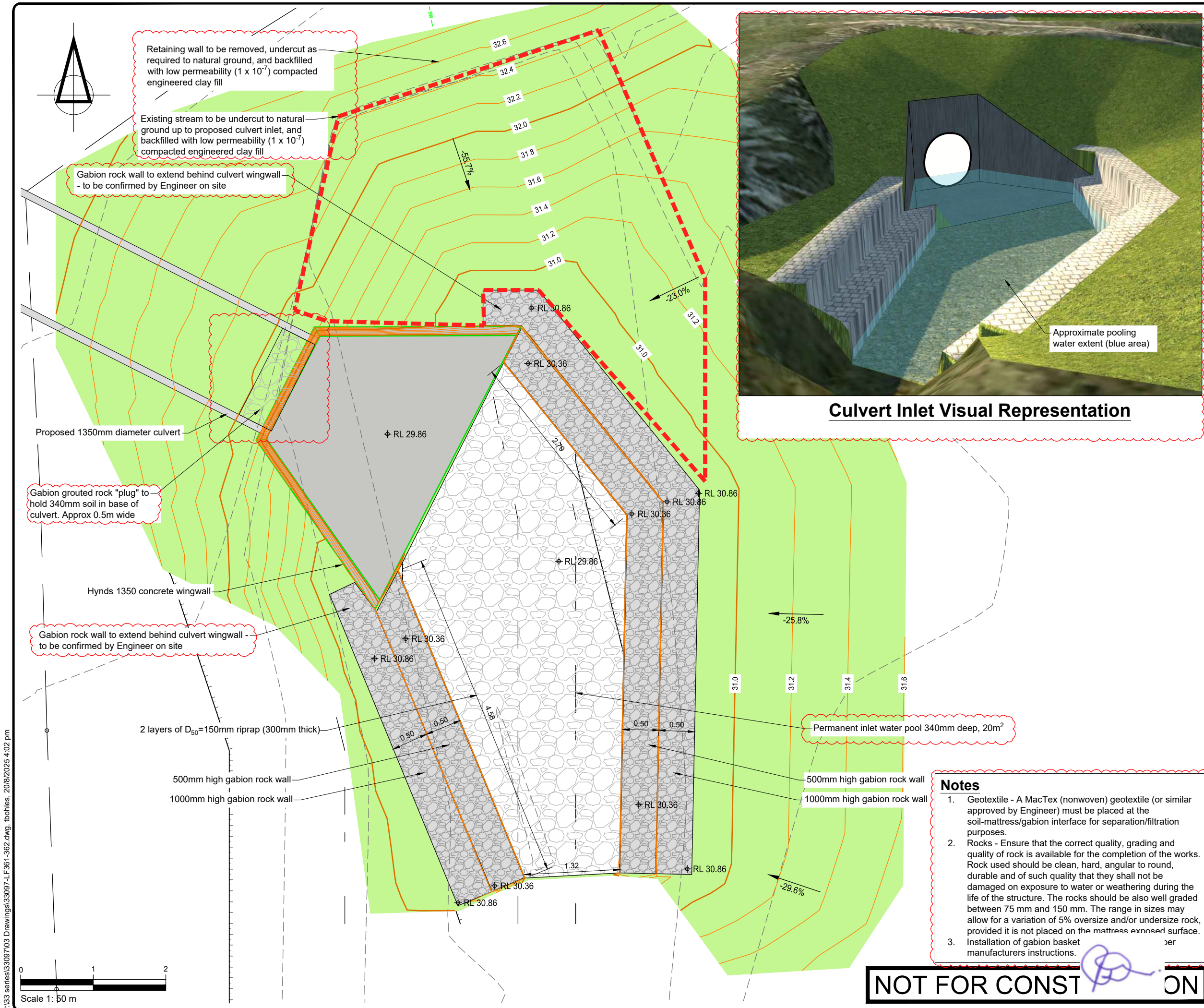
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DRAWING No 33097/LF360 REVISION D



Culvert Inlet Visual Representation

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PROJECT

TITLE
AREAS A2/H & CULVERT 3
CULVERT INLET DETAIL

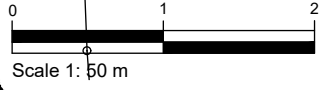


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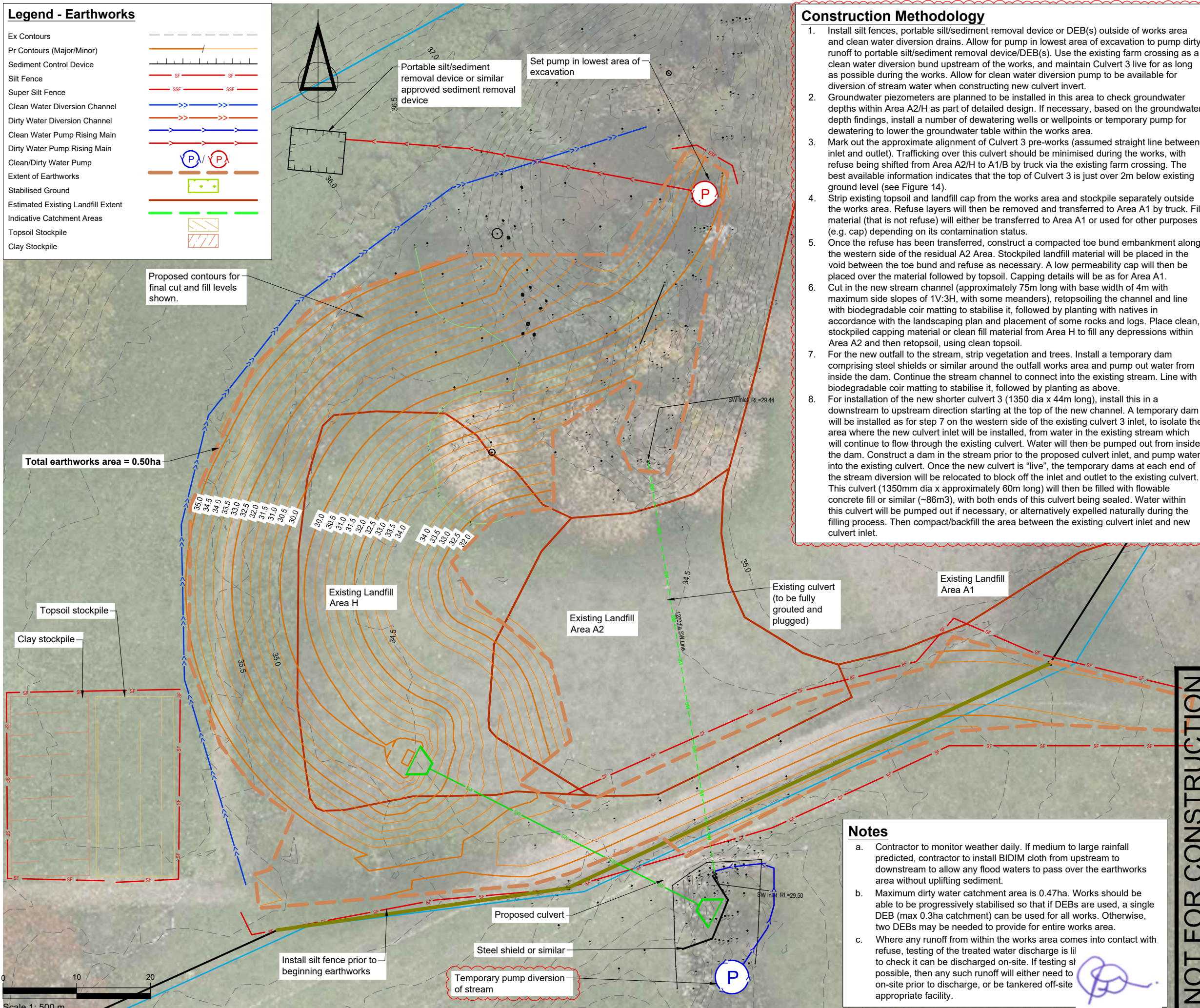
- Notes**
- Geotextile - A MacTex (nonwoven) geotextile (or similar approved by Engineer) must be placed at the soil-mattress/gabion interface for separation/filtration purposes.
 - Rocks - Ensure that the correct quality, grading and quality of rock is available for the completion of the works. Rock 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 basket 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 to check it can be discharged on-site. If testing is possible, then any such runoff will either need to be on-site prior to discharge, or be tankered off-site to appropriate facility.

[illegible]

1	2	3	4	5	6	7	8	9	10	11

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PROJECT

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



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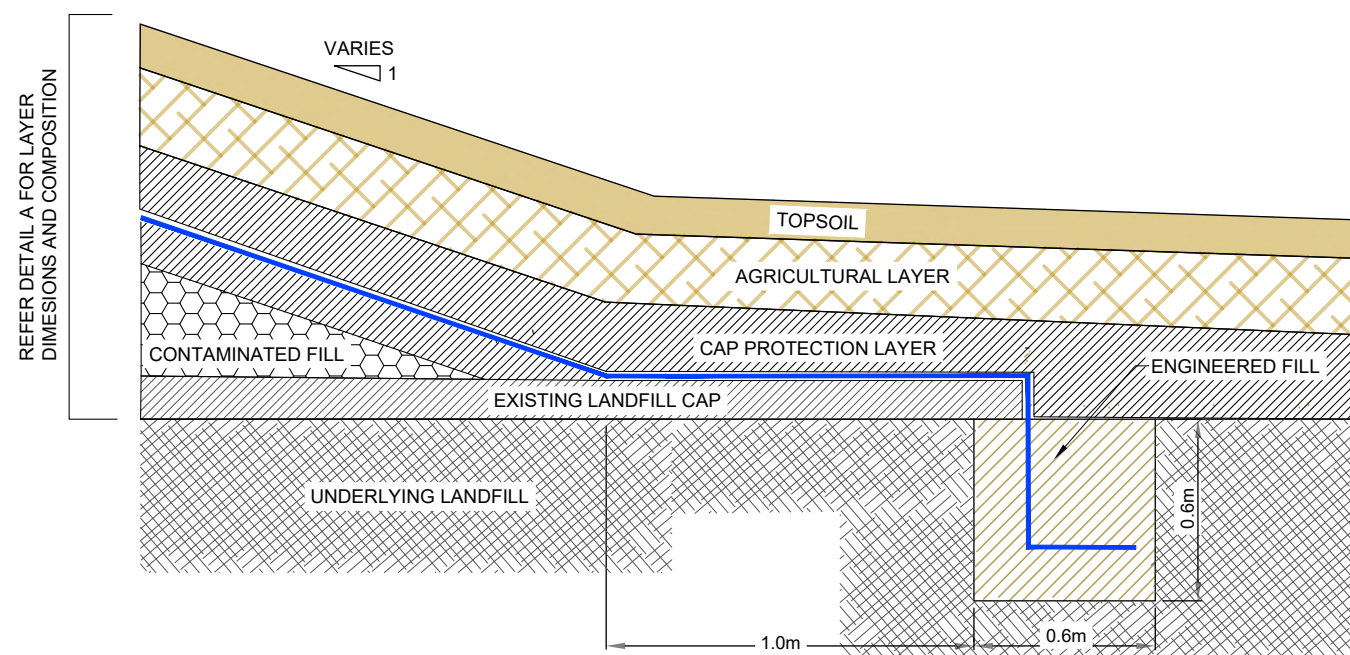
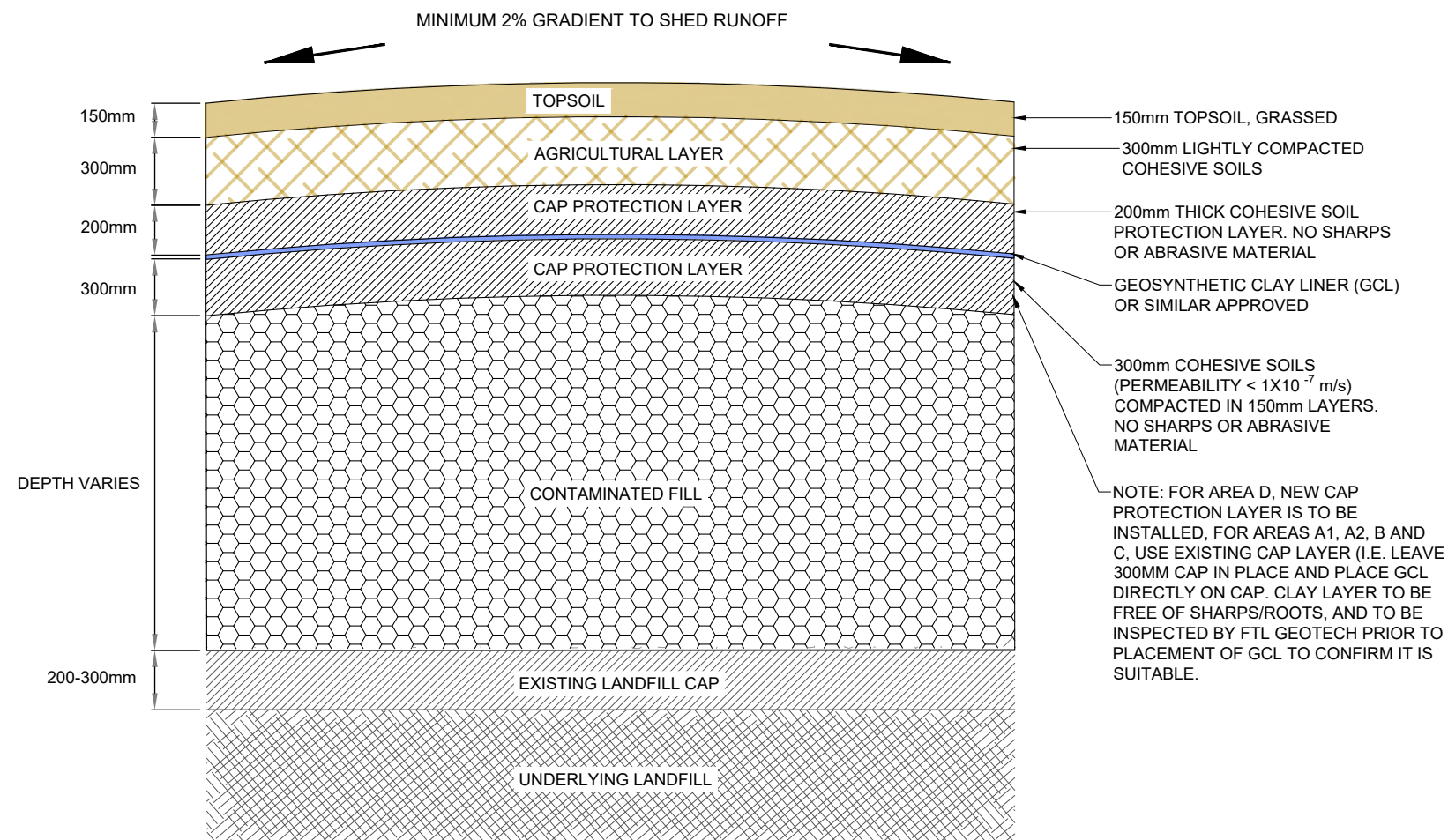
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DRAWING No	REVISION
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NOTES	

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TITLE

PROPOSED LANDFILL CELL
TYPICAL DETAIL



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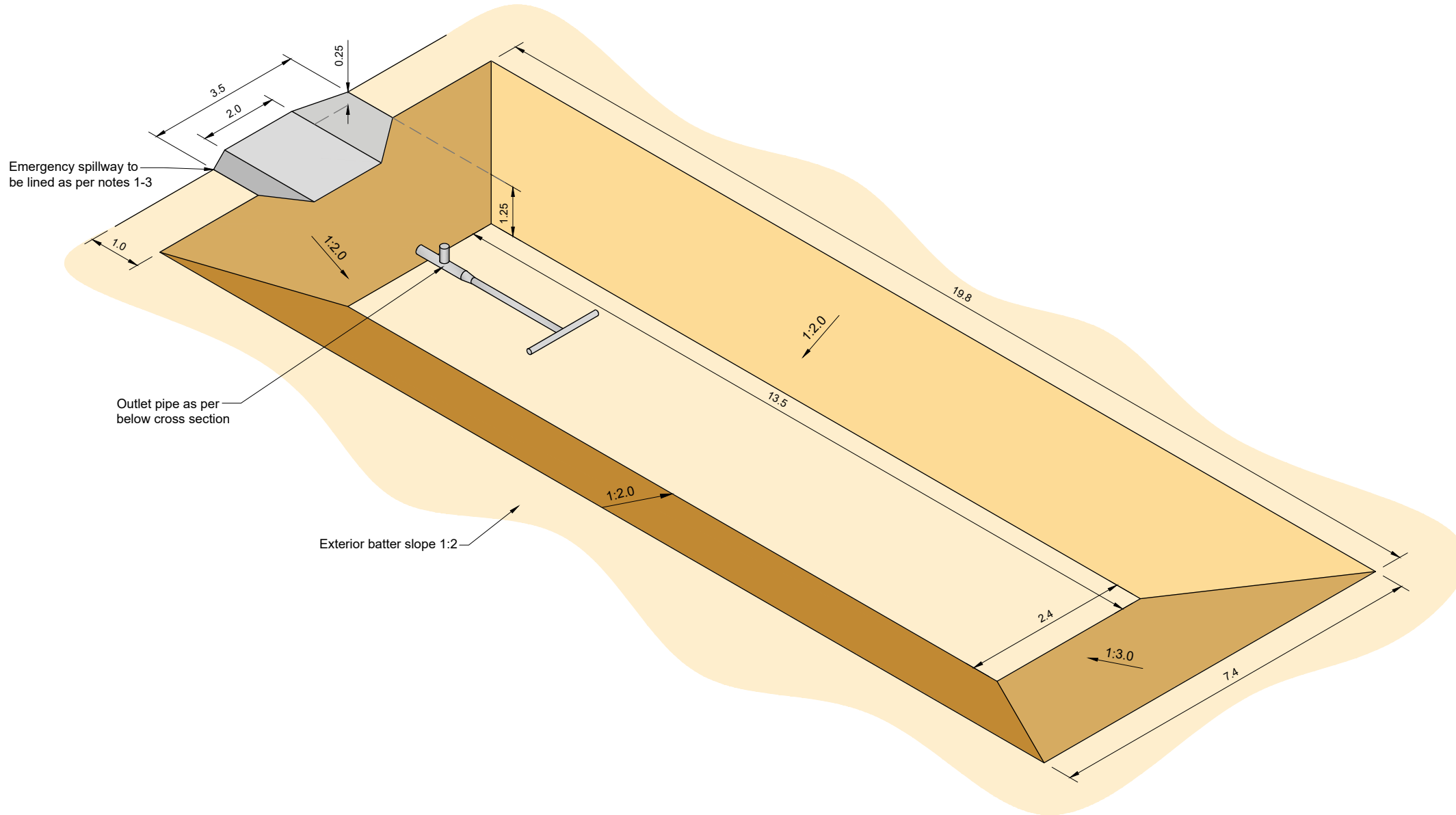
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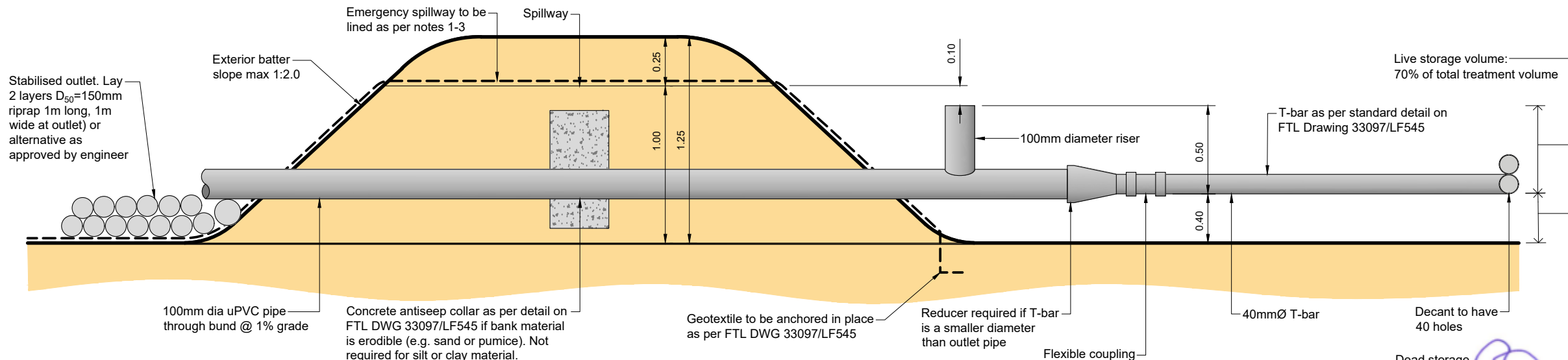
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Decanting Earth Bund Layout
NTS



Cross Section
NTS

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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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DECANTING EARTH BUND
DIMENSIONS PLAN



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Diagram illustrating the assembly of a roof joint. The diagram shows two sections, Section A and Section B, joined by overlapping wooden battens. The assembly is secured using staples and screws.

- Overlap wooden battens:** Points to the horizontal wooden battens that overlap the roof sheathing.
- Staple:** Points to the metal staples used to secure the battens to the roof sheathing.
- Section B:** The right-hand portion of the roof assembly.
- Section A:** The left-hand portion of the roof assembly.
- Screw together:** Points to the screws used to secure the overlapping battens.

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

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EROSION AND SEDIMENT
CONTROL DETAILS PAGE 1



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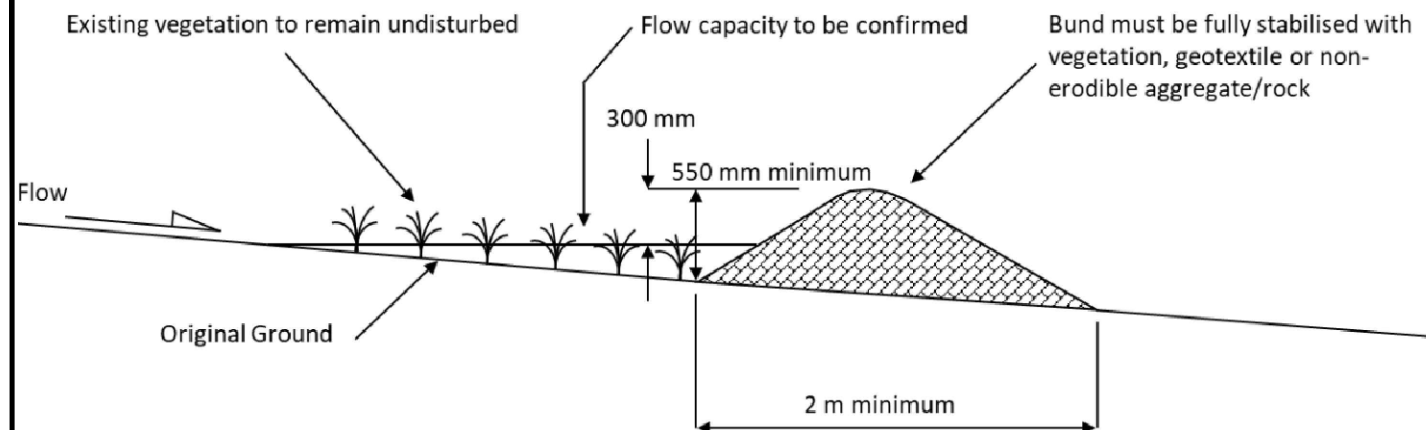
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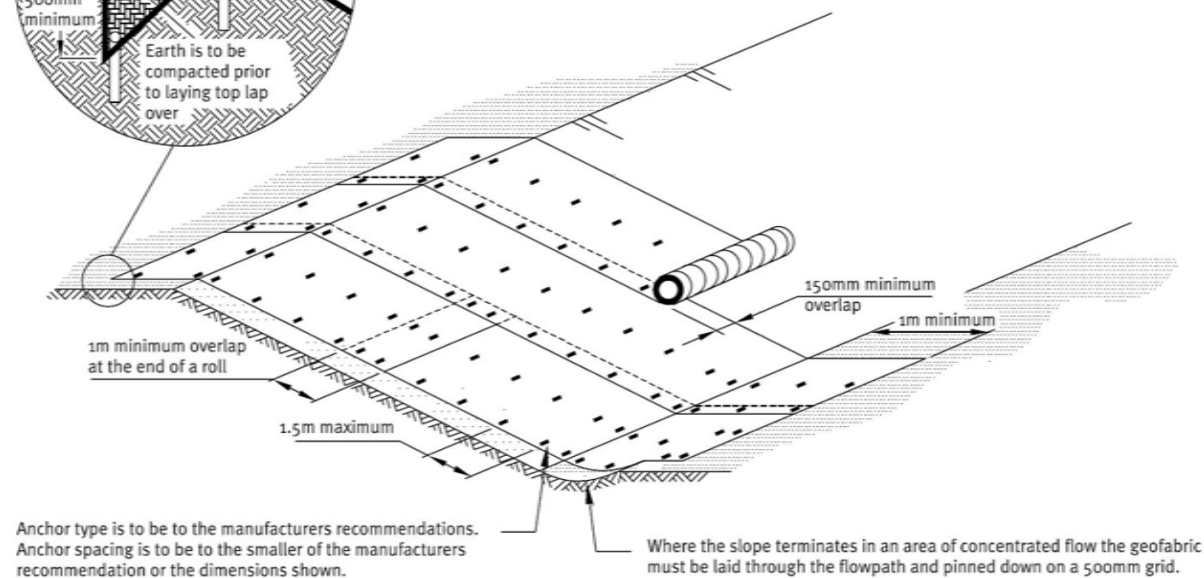
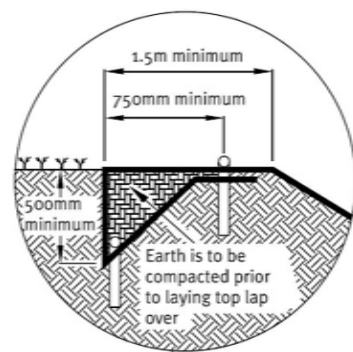
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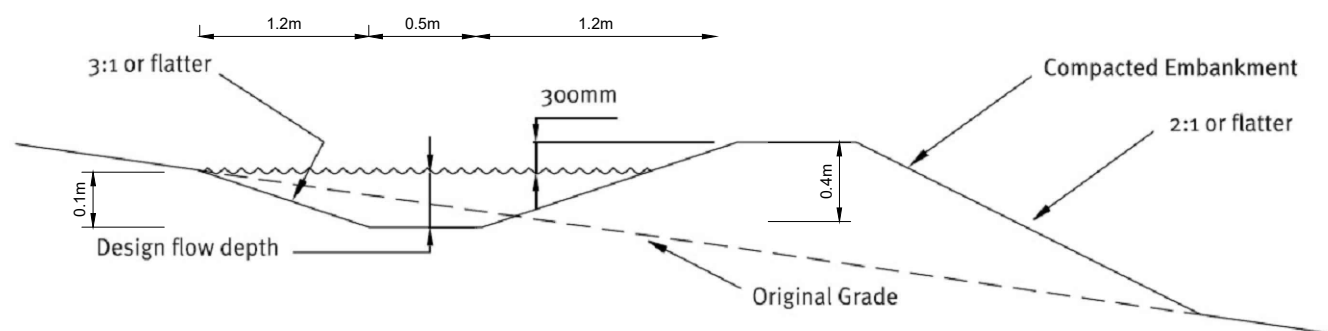
Clean Water Drain

NTS



Geotextile Layout Detail

NTS

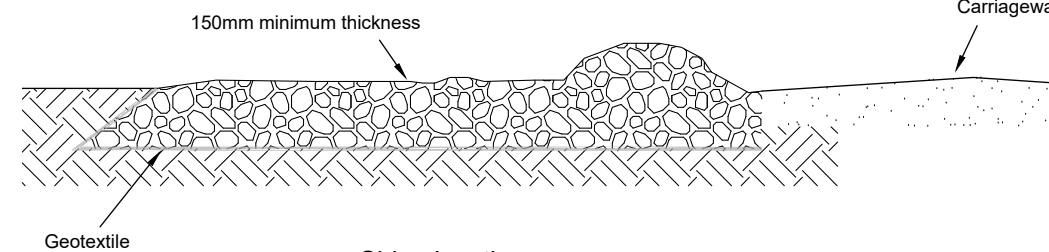


Dirty Water Drain

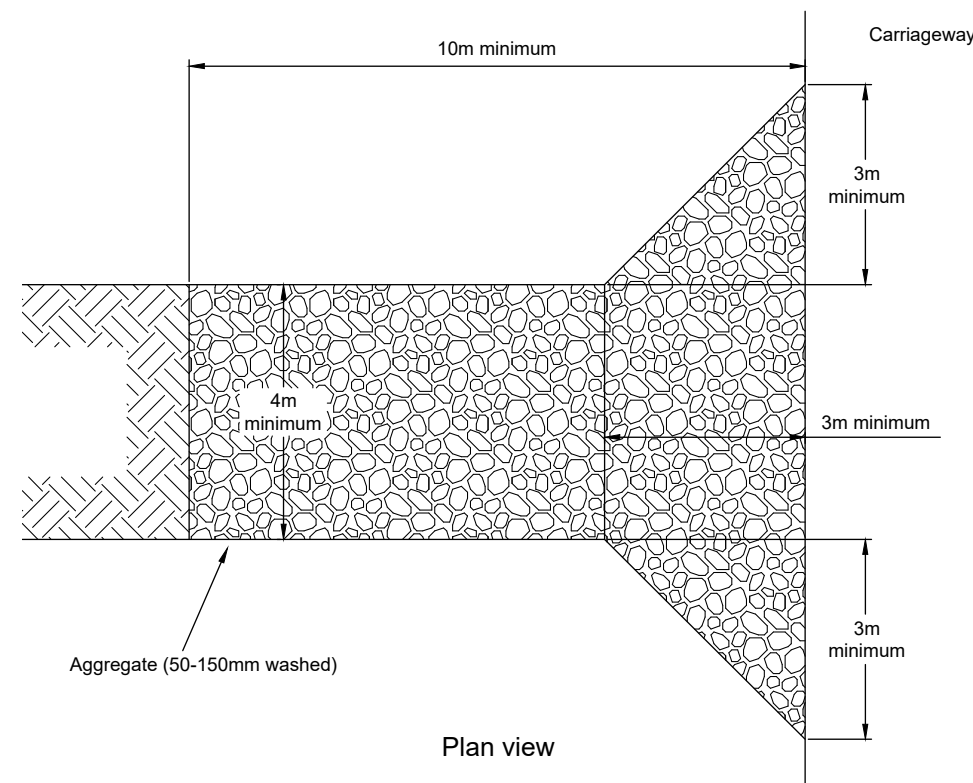
NTS

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



Side elevation



Plan view

Stabilised Entraceway

Nts

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NOTES

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EROSION AND SEDIMENT
CONTROL DETAILS PAGE 2



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