ASHBOURNE RESIDENTIAL DEVELOPMENT

EARTHWORKS MANAGEMENT PLAN

PROJECT INFORMATION

CLIENT	Matamata Developments Ltd
PROJECT	289001

DOCUMENT CONTROL

DATE OF ISSUE	26/06/2025
REVISION	C
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Contents

1. Introduction

1.1. Background

Maven Waikato Ltd have been engaged by Matamata Developments Ltd to undertake Earthworks Design in support of Ashbourne Residential Development at 127 Station Road, Matamata.

1.2. Purpose of this Report

The purpose of this report is to provide an Earthworks Management Plan (EMP) for Ashbourne Residential Development at 127 Station Road, Matamata. The information provided herein outlines the methodology associated with the proposed earthworks onsite. This report is to be read in conjunction with the engineering drawings and is to accompany the resource consent application for land use consent.

1.3. Site Description

The Ashbourne Residential area is a circa 45.2ha block of land within the Matamata-Piako District. The current site access is through 127 Station Road in Matamata. The site adjoins with the new Highgrove Development to the north-west, and Peakedale and Pippins Development to the east, and the remainder of the site is surrounded by agricultural land.

There is an existing stormwater swale that follows the southern and western boundary. The Waitoa River which runs south to north is approximately 1km to the west of the subject site.

The site has an existing farmhouse located at 127 Station Road. Most of the site is low-lying flat farmland, that is interspersed with artificial farm drains.

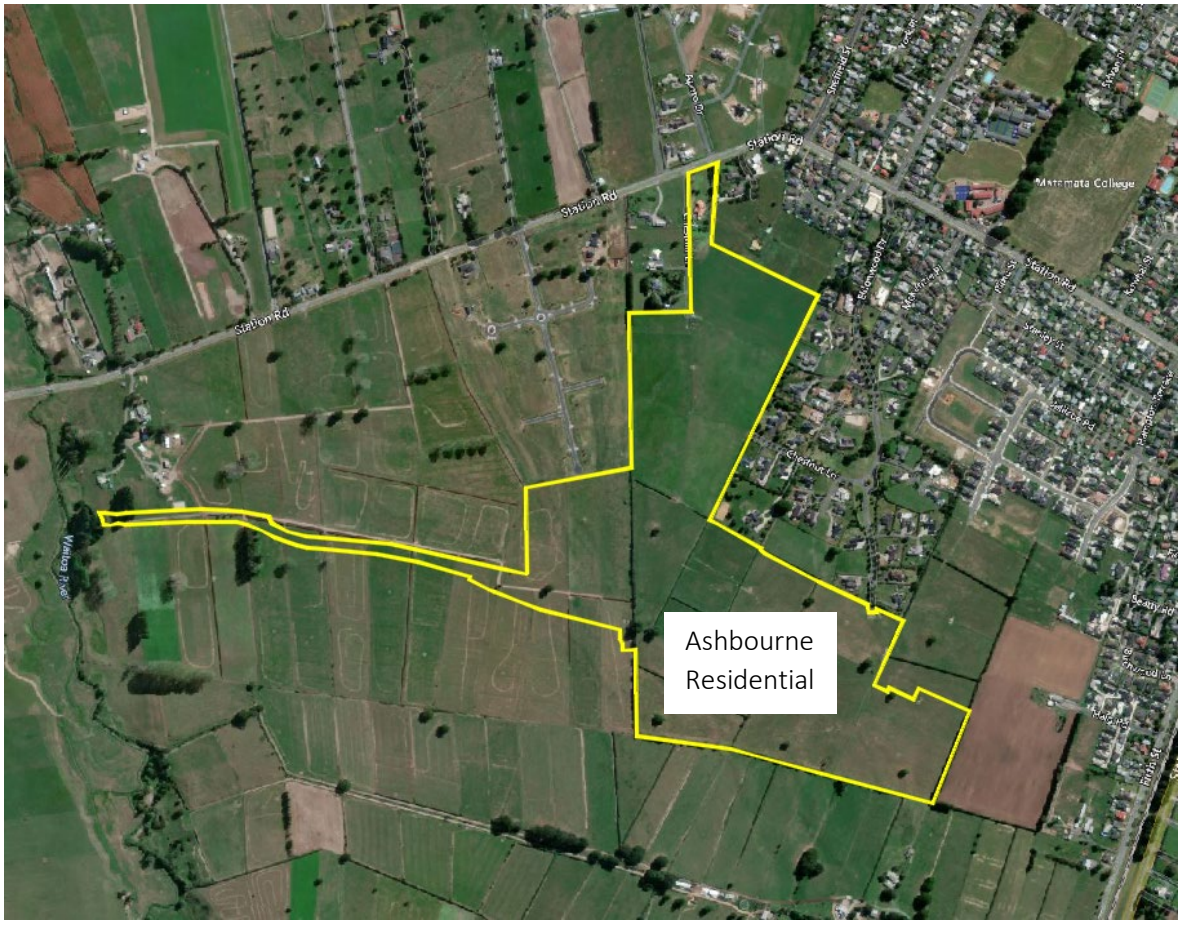


Figure 1: Site Locality

1.4. Legal Descriptions

The development site is currently split into five major parcels of land, and the legal descriptions for the parcels of land are listed in the Table 1 below:

Lot Description	Area (m^2)
Lot 1 DPS 65481	42,012
Lot 4 DP 384886	8,795
Lot 5 DP 384886	80,997
Lot 204 DP 535395	241,260
Lot 3 DPS 14362	137,069

Table 1: Legal Descriptions with Area

2. Geotechnical Investigation

Various site-specific geotechnical investigations have been conducted and a geotechnical investigation report has been prepared by CMW on 22nd May 2025, to support the fast-track resources consent application.

The report identifies the approximate distribution of prevailing landforms and geologies for the local area. The published geological maps for the area generally align with the geology encountered onsite as comprised of interbedded sand, silt, and gravel from the Hinuera formation. Please refer to the Geotechnical Investigation Report for more information.

From the ground investigations undertaken by CMW, they have summarized the site geology results in Table 2 below.

Unit	Depth to base (m)		Thickness (m)**	
	Min	Max	Min	Max
Topsoil/Fill	0.1	0.5	0.1	0.5
Firm to Stiff Silt/Sandy Silt	0.8	1.2	0.5	0.9
Stiff to Very Stiff Silt (Hinuera Formation)	1.0	1.2	0.5	1.0
Loose to Medium Dense Sand/Silty Sand (Hinuera Formation)	1.4	2.5	0.6	1.7
Dense to Very Dense Sand with interbedded Silt (Hinuera Formation)	5.9	17.3	4.9	16.3
Very Stiff to Hard Silt/Clay (Walton Subgroup)	0.1	18.1	9*	18*
Very Dense Silty Sand (Walton Subgroup)	-	-	**	**
Notes: * Strata not encountered within all test locations. **Thickness only recorded were base of strata has been confirmed.				

Table 2: Summary of Strata Encountered

Upon completion of the proposed earthworks an Earthworks Completion Report will be prepared by the Geotechnical Engineer. This report will certify the adequacy of the earthworks and make recommendations on bearing strengths for foundation design purposes.

3. Earthworks and Sediment Control

Earthworks will be undertaken as required throughout the proposed development area in different development phases and will include re-contouring, excavations for drainage reticulation, formation of building platforms and roading networks and, where applicable, construction of retaining walls. Within each development stage, the site will be further divided into different sub-catchment areas where specific erosion and sediment control measures are to be adopted.

3.1. Design Standards

Proposed measures for erosion and sediment control have been designed in accordance with Waikato Regional Council's Guide for Soil Disturbing Activities 2009, best practice solutions and the Auckland Council GD 05 document as a further guide where necessary.

3.2. Earthworks Onsite Progress and Future Programme

Earthworks will be undertaken in stages and commence when all necessary consents are in place. Once consents are in place, then a start date will be determined in the next earthworks season. It is envisaged that all earthworks will be completed within three (3) earthworks seasons. Applications for Winter Works will only be lodged if required.

It is proposed that the bulk earthworks operation will comprise of three separated work sections (Stage 1, 2, and 3) that will be undertaken independent of each other as shown on the earthwork plans attached in Appendix A.

Works are intended to be carried out in the following steps:

- Install silt control measures, as shown on Engineering Drawings or agreed plans provided at Preconstruction meeting.
- Install sediment controls ponds, clean and dirty water diversion bunds.
- Carry out Bulk Earthworks.
- Install drainage systems, outlets, and riprap.
- Form channel and building platform areas concurrently as site is stabilised.
- Stabilise Road corridors by placing the subgrade improvement layer of brown rock ready for civil construction to place.
- Retain and maintain silt control measures until completion.

3.3. Earthworks Summary

As mentioned in the above chapter, the bulk earthworks on site will be divided into three separated work sections. These are from Stage 1 to 3, including stormwater basins, and wastewater pumpstations. Please refer to the engineering drawings for detail and the extent of works attached in Appendix A.

- Stormwater Basin A will be constructed at Stage 1 Earthworks.
- Central Wastewater Pumpstation will be constructed at Stage 2 Earthworks.
- Stormwater Basin B and Greenway will be constructed at Stage 2 Earthworks.
- Stormwater Basin C and Northern Wastewater Pumpstation will be constructed at Stage 3 Earthworks.
- Stormwater Basin D will be constructed at Stage 3 Earthworks.

3.4. Total Earthworks

Bulk Subgrade Earthworks (topsoil stripping exclusive)	
Total area of ground disturbance	451,969 m^2 (45.39ha)
Total volume of CUT	238,361 m^3
Total volume of FILL	217,935m^3
Total Volume of FILL with Compaction Factor (1.1)	239,729 m^3
Maximum CUT and FILL depth	2.58m FILL / 3.52m CUT
Total Volume (surplus of CUT)	- 1,368 m^3
Others	
Topsoil stripping (300 mm)	136,156 m^3

Table 3: Summary of Total Earthworks

3.5. Stage 1 Earthworks

Subgrade Earthworks (topsoil stripping exclusive)	
Total area of ground disturbance	99,876 m^2 (9.99ha)
Total volume of CUT	76,415 m^3
Total volume of FILL	19,285 m^3
Total Volume of FILL with Compaction Factor (1.1)	21,214 m^3
Maximum CUT and FILL depth	1.70m FILL / 3.52m CUT
Total Volume (surplus of CUT)	- 55,201 m^3
Others	
Topsoil stripping (300 mm)	29,963 m^3

Table 4: Summary of Stage 1 Earthworks

3.6. Stage 2 Earthworks

Subgrade Earthworks (topsoil stripping exclusive)	
Total area of ground disturbance	211,782 m^2 (21.18ha)
Total volume of CUT	152,928 m^3
Total volume of FILL	60,619 m^3
Total Volume of FILL with Compaction Factor (1.1)	66,681 m^3
Maximum CUT and FILL depth	1.90m FILL / 3.38m CUT
Total Volume (surplus of CUT)	- 86,247 m^3
Others	
Topsoil stripping (300 mm)	63,535 m^3

Table 5: Summary of Stage 2 Earthworks

3.7. Stage 3 Earthworks

Subgrade Earthworks (topsoil stripping exclusive)	
Total area of ground disturbance	142,193 m^2 (14.22ha)
Total volume of CUT	9,018 m^3
Total volume of FILL	138,031 m^3
Total Volume of FILL with Compaction Factor (1.1)	151,834 m^3
Maximum CUT and FILL depth	2.58m FILL / 1.87m CUT
Total Volume (shortfall of FILL)	+ 142,816 m^3
Others	
Topsoil stripping (300 mm)	42,658 m^3

Table 6: Summary of Stage 3 Earthworks

3.8. Stockpiles between Stages

Bulk earthworks are expected to generate a surplus of CUT material in Stage 1 and 2, with a significant Fill shortfall in Stage 3. The following approach will be adopted:

Stage	Net Cut/Fill	Action
Stage 1	Surplus CUT (55,201 m³)	Temporarily stockpiled in designated future Stage 3 fill zones
Stage 2	Surplus CUT (86,247 m³)	Combined with Stage 1 surplus; progressively transferred to Stage 3
Stage 3	FILL shortfall (142,816 m³)	Fulfilled using surplus CUT from Stage 1 and 2

Table 7: Summary of Earthworks in 3 stages

3.8.1. Stockpiling Details

Stockpiles will be limited to a height specified by the Geotechnical Engineer, with 2:1 side slopes, and protected with silt fences and toe bunds.

Stabilisation of stockpiles using hydroseeding or mulch will occur within 7 days of stockpiling.

Stockpiles will be placed within the final Stage 3 footprint, ensuring minimal double handling, and avoiding contamination of clean catchments. Refinement to the filling strategy would see fill material being placed and engineered to avoid further handling or segregation.

Note: All stockpiling and reuse operations will be tracked with GPS or site logs to ensure material origin, volume, and placement areas are accurately recorded for the final Earthworks Completion Report.

3.9. Stockpile Locations

During the earthworks operations, all excavated materials generated in Stages 1 and 2, approximately 141,448m³ of CUT, will be temporarily stockpiled in designated areas within the project site. These stockpile locations have been strategically selected to ensure minimal disruption to ongoing works and to facilitate efficient rehandling during subsequent stages. The stored material will be reused as FILL in future stages (stage 3), in accordance with the C200 – EARTHWORKS drawing from Maven Waikato Ltd. Proper erosion and sediment control measures will be implemented around stockpiles to prevent environmental impacts and maintain site safety and accessibility.

Please refer to Appendix A – Earthworks Drawings for further details.

4. Existing and Proposed Erosion Control

As the site is currently a low-lying flat farmland, multiple sediment controls and devices need to be constructed onsite. Below we have outlined the general principles and philosophies that will be adopted for any current controls and/or future proposed controls. Regular site inspections to be undertaken by Waikato Regional Council (WRC).

Any future proposed controls will be all in general accordance with the Waikato Regional Council best practice erosion and sediment control measures as per WRC TR2009/02 guidelines.

Silt control measures will need to be installed onsite, checked, and confirmed acceptable by the Engineer before works commence in the designated areas. During earthworks, the sediment control measures will be maintained such that they function as proposed.

The site will be progressively stabilised with topsoil and grass seed as earthwork levels are achieved. Silt control measures will only be removed once the site is considered stable in terms of silt run-off.

4.1. Proposed Controls

The following system of silt and sediment control protection measures are proposed: below sections covers the methodology for various stages of the development. For clarity, Refer to staging plans as part of this application, in conjunction with the below staging works methodology.

4.1.1. Stage 1

A system of clean & dirty water diversions bunds will be placed around the stage 1 earthworks area. Stage 1 area has been calculated to be approximately 9.9ha, bunding within the working area will direct dirty water into SRP 1A and SRP 2A each with a 5ha catchment capacity.

Topsoil and Clay stockpiles will be located outside of the Staging area each with bunding and Decanting earth bunds to mitigate rain events. Temporary haul roads to allow for stockpiling will have drop out pits

4.1.2. Stage 2

Stage 2 earthworks have been divided into residential and greenway areas.

Residential:

The residential area has been calculated to be approximately 17.9ha. Bunding within the working area will direct dirty water into 4 SRP's 2A,2B and 2C each with a 5ha catchment capacity and SRP 2D capturing the remaining stage 2 areas.

Topsoil, Clay stockpiles and Hall roads established in Stage 1 will continue to be used.

Greenway:

The Greenway area has been calculated to be approximately 3.6ha. Construction of the greenway will start at the downstream portion of the greenway constructing the discharge point into the existing stream within a dry weather window. As this section is 0.1Ha and will be controlled with silt fencing. Methodology will be confirmed with Geologist to ensure any areas close to Waitoa River, classified as being sensitive is protected and follows required protocol

An existing main farm drain running parallel to the northern boundary of the greenway with the final 300m crossing into the greenway area. The proposed cross section of the greenway shows a proposed maintenance track which follows the grade of the greenway channel. A clean water diversion drain will be created within the maintenance track to control all flows from farm drains.

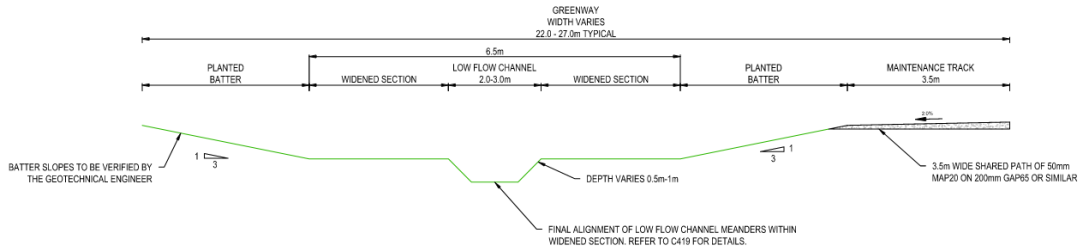


Figure 2: Greenway cross section

Stage 2b of the greenway construction will be approximately 250m and will connect the stream discharge to where the farm drain enters the greenway area. At each stage, a dam will be constructed and used as an SRP to restrict sediment from flowing through the previously constructed areas. The final 250m of farm drain will need to be cleared of fish before dewatering.

Stage 2c will need to be constructed into smaller substages as it will cross 7 minor farm drains which all discharge into the main farm drain located on the northern boundary. Each substage is approximately 0.4ha A single minor drain will be intercepted at the southern boundary and be redirected via a clean water bund. On the northern boundary the clean water bund within the maintenance track will be continued. All up stream minor drains will continue to flow into the main drain which will reduce the size requirement of the southern clean water bund.

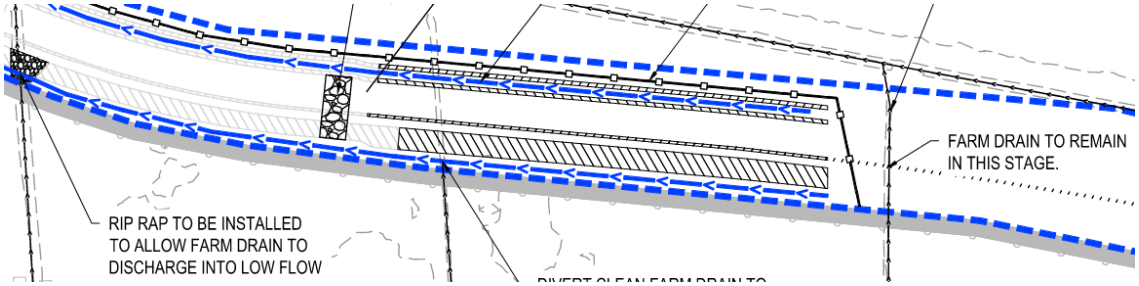


Figure 3: Greenway Stage 3B

Once each substage is completed a new dam will be created to control sediment flows with a new minor farm drain diverted. Rip rap will then be installed in the previously constructed area allowing the minor farm drain to discharge into the low flow stream in the greenway. Dans in the previous substages will be converted into coffer dams controlling flows from the minor farm drains and protecting the constructed areas from major rain events until planting is established.

Stage 4 will be the final part of the greenway construction from the last minor farm drain and the include the soakage basin. The same method of constructing a dam within the greenway to act as a sediment retention pond. Once construction of the pond and waterway is completed backfill and construction of the maintenance track.

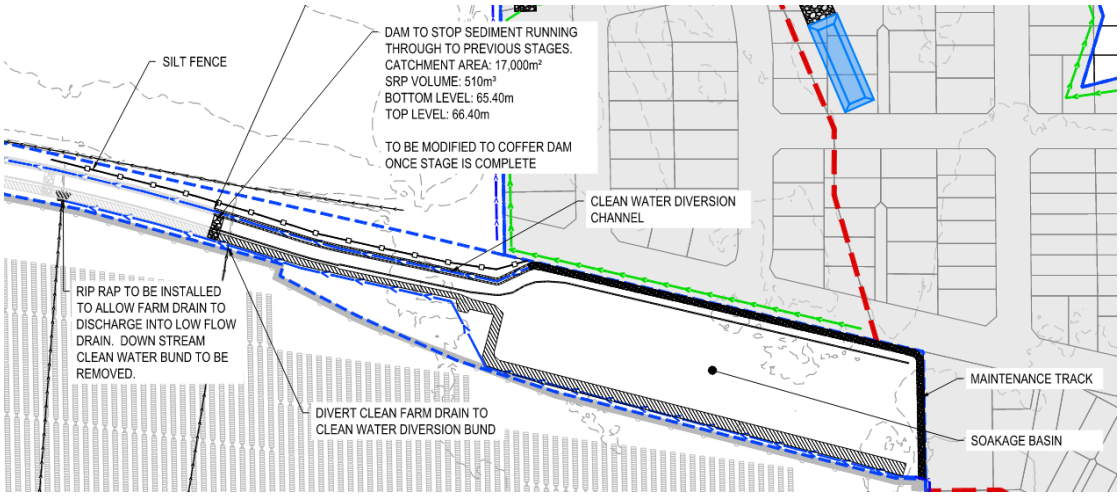


Figure 4: Greenway Stage 4

4.1.3. Stage 3

A system of clean & dirty water diversions bunds will be placed around the stage 3 earthworks area. Stage 3 area has been calculated to be approximately 14.3ha, bunding within the working area will direct dirty water into SRP 3A, 3B and 3C each with a 5ha catchment capacity.

Topsoil and Clay stockpiles that have been transferred from the previous stages will be utilised within this stage with excess topsoil to he removed form site.

4.2. Potential Environmental Impacts

During the earthworks there is a risk of dust nuisance during dry and windy weather. To manage potential dust effects, the following management measures are proposed:

1. That a maximum earthworks area of 20ha shall be opened at any one time.
2. Earthworks shall be effectively stabilised using the following methods:
    a. Topsoiling and grassing
    b. Hydroseeding
    c. Using hay or straw mulching
3. An adequate supply of water for dust control and effective means of application is always available on-site during earthworks, until such time as the site is fully stabilised.
4. Sufficient water will be available for dust mitigation with water storage tanks retained on site until it is fully stabilised. The water tanks will be re-charged via truck and trailer water cart.
5. Sufficient water will be available on site with the consented bore providing water for dust suppression and conditioning. Additional water can be trucked in from offsite once the consented bore allocation of 12,500m^3 annually has been spent.
6. In the event dust control management is ineffective and if found necessary, the contractor shall employ the use of soil stabilisers (such as polymers or similar) or weatherproof cover where possible.

5. Additional Information

5.1. Fill Compaction

Each layer of material shall be compacted by approved compacting machinery throughout its whole area and depth to achieve:

Not less than the following percentages of maximum dry density obtainable for the material by standard compaction at optimum moisture content determined by NZS 4402, Pt 2P: Test 14:		Clays and Silty Clays	Sands and Gravel
A	Within 500mm of the finished carriageway sub grade levels and within 3m of batter edges	98%	100%
B	Elsewhere	95%	97%
Clays		Air Voids % (as defined NZS 4402: Part 1)	Undrained Shear (measured by in-situ vane)
A	Within 500mm of road subgrade levels and within 3 meters	Average value less than 8% (any 10 tests) Maximum single value 10%	Average value not less than 170 KPa minimum single value 140 KPa
B	General Fill	Average value less than 10% (any 10 tests)	Average value not less than 150 KPa minimum single

		Maximum single value 12%	value 110 KPa
C	Reserve Areas deeper than 600mm below finished formation level	Maximum value 15%	Minimum value 75 KPa

Table 8: Fill Compaction Requirements by Soil Types

5.2. Monitoring

All sediment control measures will be checked to ensure that they are performing as intended.

A site walk over shall be undertaken daily before leaving the site to identify any corrective maintenance required. A more thorough inspection will be undertaken at the end of each week, or before and after a forecast major storm event, to identify any preventative and/or corrective maintenance required.

A regular program of sediment, debris and trash removal will be undertaken to ensure sediment control measures do not become blocked and ensure they function as proposed. Any large floating matter including any organic matter, i.e., fallen tree litter, reaching the pond or discharge structures is to be removed immediately.

Specific monitoring and maintenance of each mitigation method is included below:

5.2.1. Decant Bund

- Inspect every day and before every forecasted rainfall event. Inspect for correct operation after every runoff event. Immediately repair any damage caused by erosion or construction equipment.
- Inspect Level Spreaders after every rainfall until vegetation is established and promptly undertake any necessary repairs. Ensure vegetation is kept in a healthy and vigorous condition.
- Clean out before the volume of accumulated sediment reaches 20% of the total volume. To assist in gauging sediment loads, clearly mark 20% volume height on the riser.
- Clean out with high-capacity sludge pumps, or with excavators (long reach excavators if needed) loading onto sealed tip trucks or to a secure area.
- Deposit the sediment in such a location so that is does not lead to a direct discharge to receiving environments. Stabilise all disposal sites as required.

5.2.2. Retention Pond

- Chemical treatment will be provided to the pond if 100mm of water clarity is not achieved before discharge, this will be achieved by dossing/flocculation.

5.2.3. Diversion Drains / Clean Water Cut-off Bunds

- Inspect after every rainfall event and during periods of prolonged rainfall for scour and areas where they may breach.
- Repair immediately if required to ensure that the design capacity is maintained.
- Remove any accumulated sediment deposited in the Runoff Diversion Channel / Bund due to low gradients and velocities.
- Carefully check outlets to ensure that these remain free from scour and erosion.

5.2.4. Silt Fence

- Inspect Silt Fences at least once a week and after each rainfall. Make any necessary repairs when bulges occur, or sediment accumulation reaches 50% of the fabric height.
- Any areas of collapse, decomposition or ineffectiveness need to be immediately replaced.

- Remove sediment deposits as necessary to continue to allow for adequate sediment storage and reduce pressure on the Silt Fence. Ensure that the sediment is removed to a secure area.
- Do not remove Silt Fence materials and sediment deposition until the catchment area has been appropriately stabilised. Stabilise the area of the removed Silt Fence.

5.2.5. Silt Socks

- Inspect Filter Socks at least once a week and after each rainfall. Make any necessary repairs when necessary.

5.2.6. Stabilised Vehicle Entrance

- Maintain the Stabilised Construction Entrance in a condition to prevent sediment form leaving the construction site. After each rainfall inspect any structure used to trap sediment for the Stabilised Construction Entrance and clean out, as necessary.

5.3. Stabilisation

Stabilisation of earthworked areas shall be undertaken progressively as final ground levels are reached or where works are temporarily paused for more than 14 days.

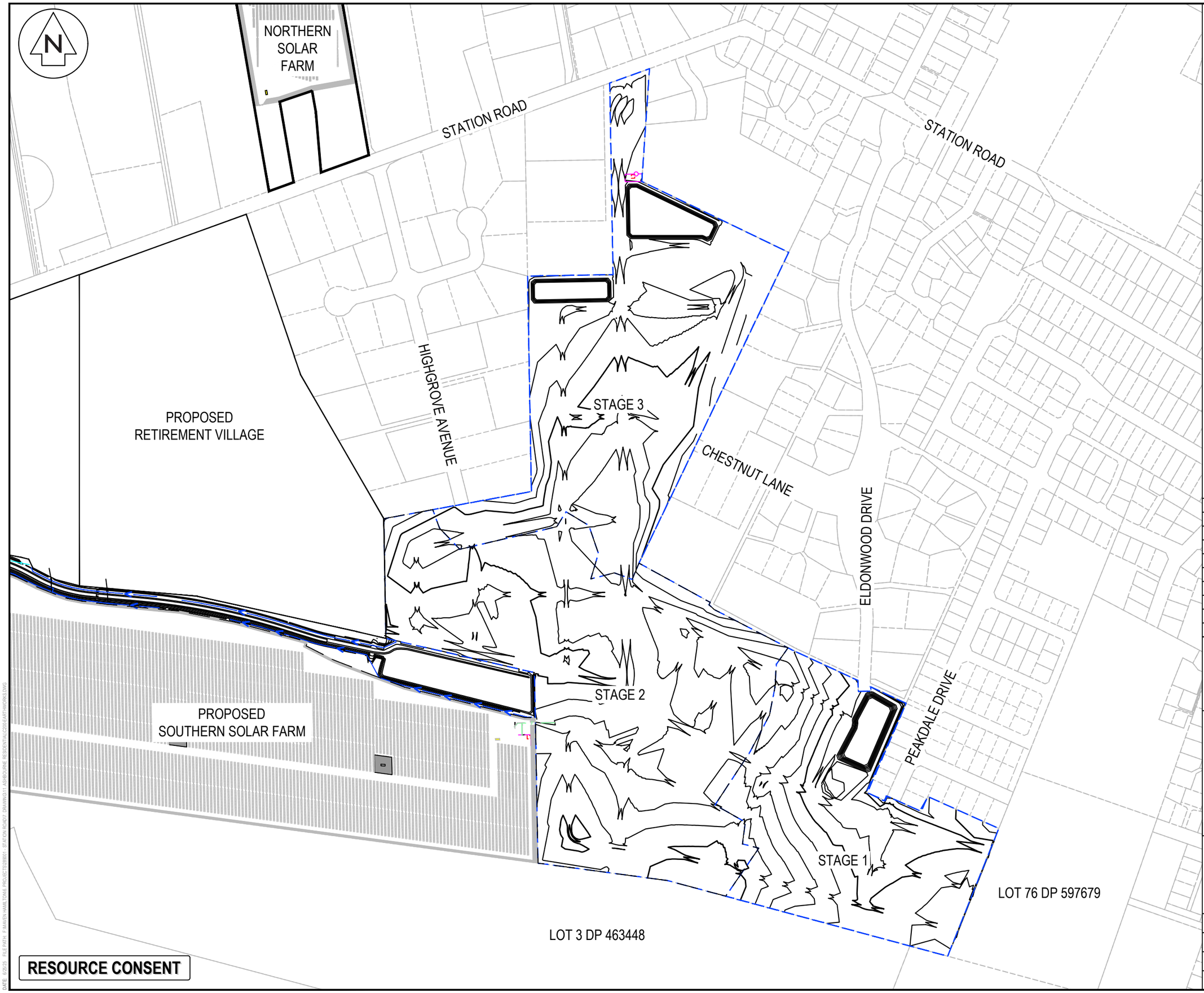
The following stabilisation measures and timing are proposed in line with WRC guidelines:

Condition	Stabilisation Method	Timeframe
Final earthwork levels achieved	Topsoil and grass seeding	Within 5 working days
Temporary pause in work >14 days	Hydroseeding or straw mulching	Within 7 calendar days
Final surface not expected within 60 days	Polymer stabilisation or erosion control matting	Within 10 working days
Post-winter shutdown	Stabilisation of all exposed area	Before 30 April annually

Table 9: Stabilisation Measures and Timing in WRC Guidelines

Maintenance: All stabilised areas will be monitored weekly and after heavy rainfall (>20mm/hr) to ensure full vegetation cover (minimum 80%) is achieved. Any bare patches or erosion will be repaired promptly with mulching or swift remedial action.

Appendix A – Earthworks Drawings



RESOURCE CONSENT

Notes

1. All works to be in accordance with Waikato Regional Council Erosion and Sediment Control: guidelines for soil disturbing activities TR 2009/02.
2. Co-ordinates in terms of NZ Geodetic Datum NZTM 2000.
3. Levels in terms of New Zealand Vertical Datum 2016.
4. Benchmark: IT I DPS 29877 RL: 65.51.
5. Boundaries are subject to final survey.
6. It is the Contractors responsibility to locate all services that may be affected by his operations.
7. The Contractors shall obtain all necessary approval from utility operators before commencing work under or near their services.
8. Contours are shown at 0.5m minor and 2.5m major.

Legend

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

Rev	Description	By	Date
C	FAST TRACK APP	MKS	06/2025
B	FAST TRACK APP	MKS	05/2025
A	FAST TRACK APP	DJM	04/2025

	By	Date
Survey	MAVEN	05/2024
Design	MKS	10/2024
Drawn	MKS	10/2024
Checked	DJM	06/2025

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Project
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Title
PROPOSED CONTOUR OVERVIEW PLAN

Project no.	289001		
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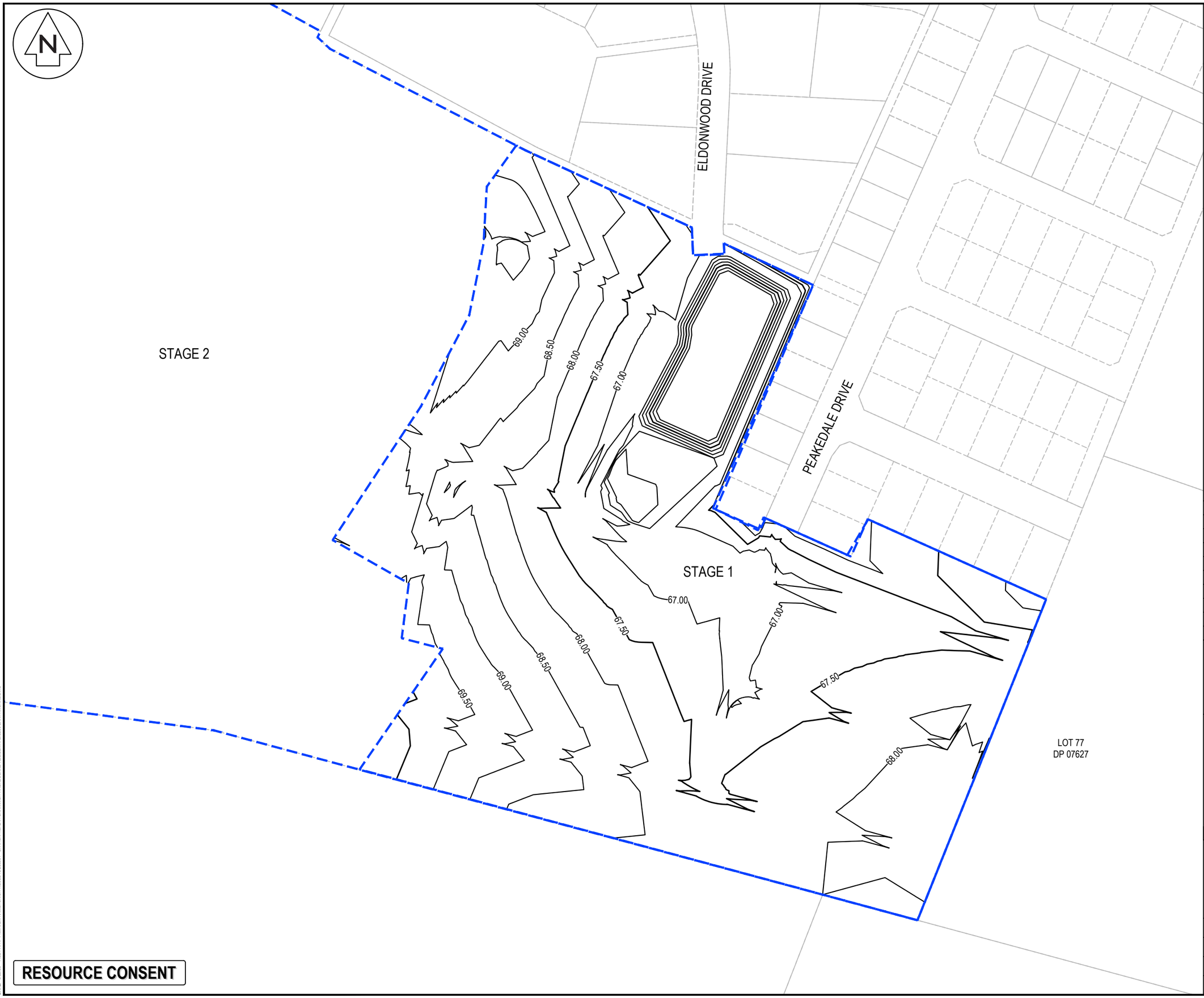
Cad file	C200-EARTHWORKS.DWG		
Drawing no.	C200	Rev	C



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9. Sub-staging boundaries can be found from C230-1.

Legend

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- PR EXTENT WORK
- PR SUBSTAGE BDY

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ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

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PROPOSED STAGE 1 CONTOUR PLAN

Project no.	289001
Scale	1:2000 @ A3
Cad file	C200-EARTHWORKS.DWG
Drawing no.	C201 Rev C

RESOURCE CONSENT

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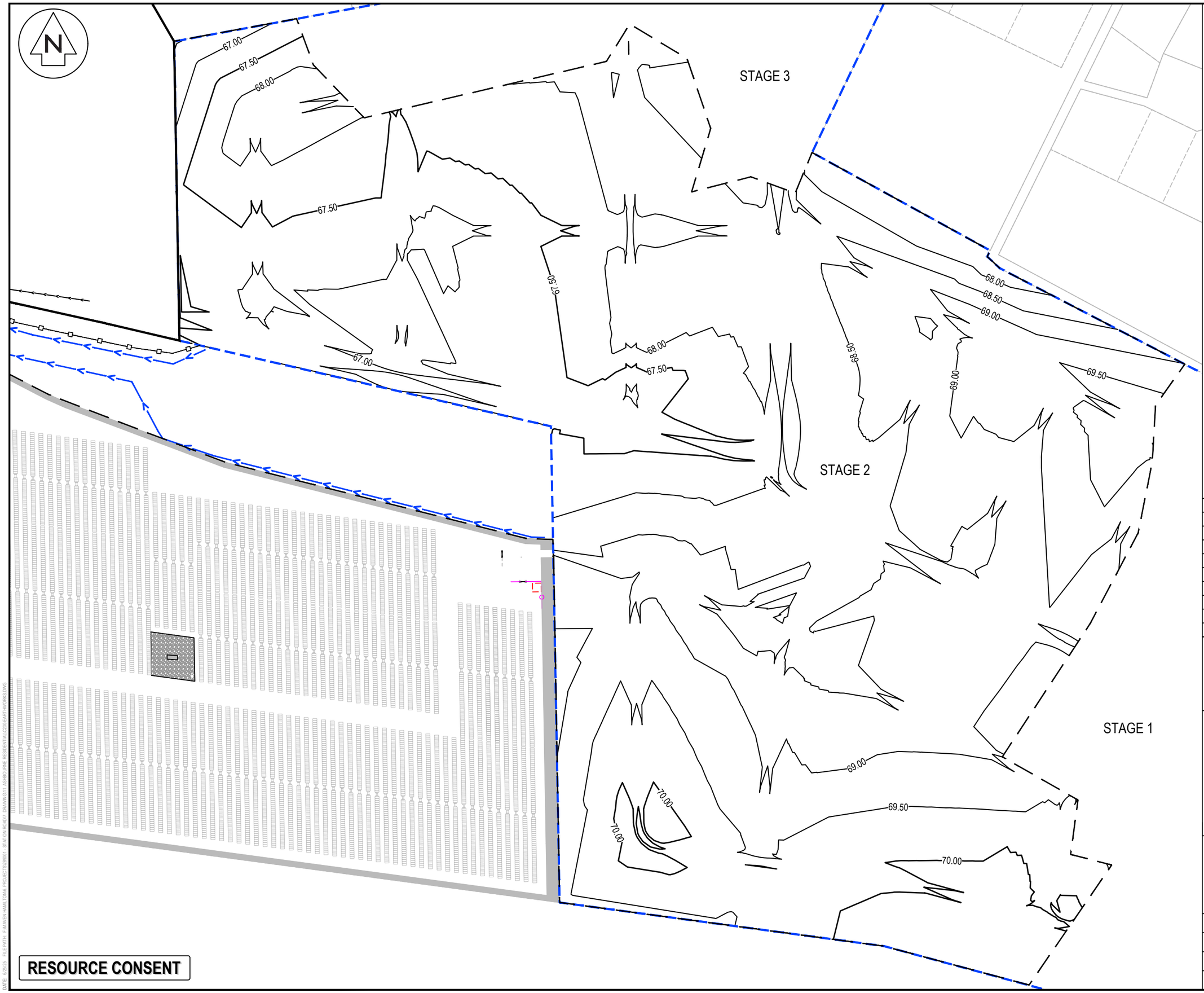

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Legend

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PROPOSED STAGE 2 CONTOUR PLAN

Project no.	289001		
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Cad file	C200-EARTHWORKS.DWG		
Drawing no.	C202	Rev	C

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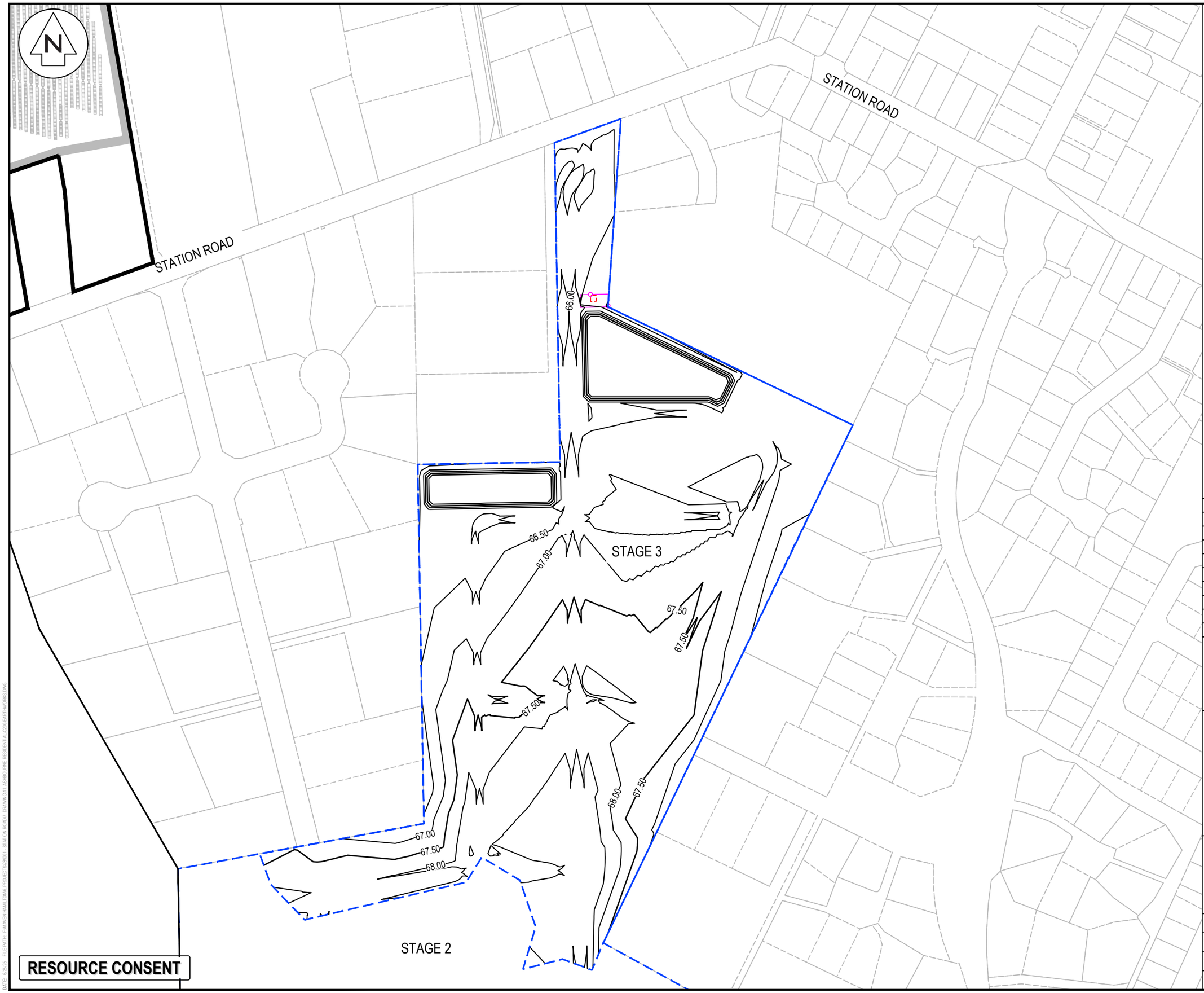

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2. Co-ordinates in terms of NZ Geodetic Datum NZTM 2000.
3. Levels in terms of New Zealand Vertical Datum 2016.
4. Benchmark: IT I DPS 29877 RL: 65.51.
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7. The Contractors shall obtain all necessary approval from utility operators before commencing work under or near their services.
8. Contours are shown at 0.5m minor and 2.5m major.
9. Sub-staging boundaries can be found from C230-3.

Legend

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

Rev	Description	By	Date
C	FAST TRACK APP	MKS	06/2025
B	FAST TRACK APP	DJM	05/2025
A	FAST TRACK APP	DJM	04/2025

	By	Date
Survey	MAVEN	05/2024
Design	MKS	10/2024
Drawn	MKS	10/2024
Checked	DJM	06/2025

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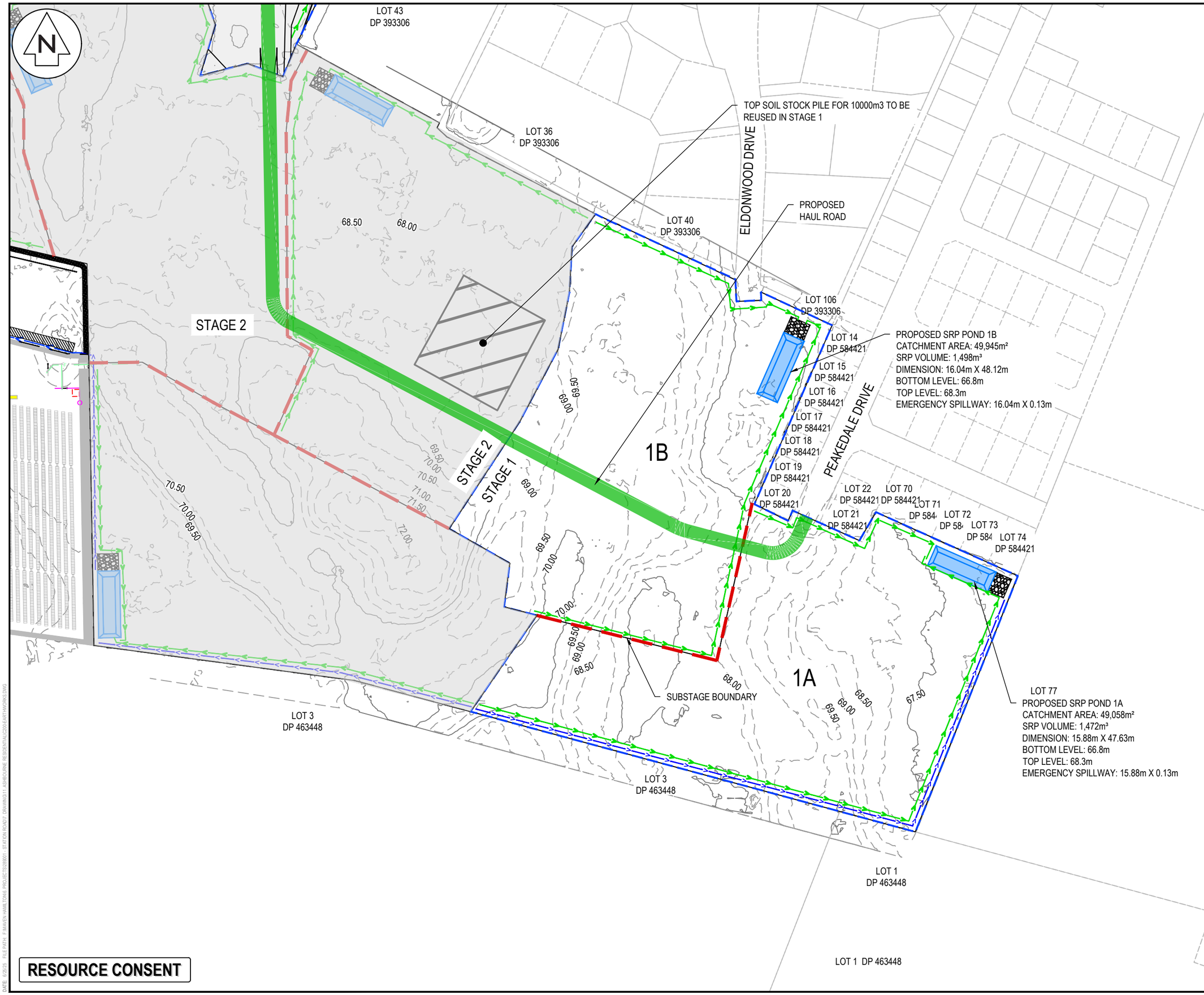
Project

ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title

PROPOSED STAGE 3 CONTOUR PLAN

Project no.	289001		
Scale	1:3000 @ A3		
Cad file	C200-EARTHWORKS.DWG		
Drawing no.	C203	Rev	C



Notes

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9. Discharge from SRP Pond to be relied on soakage unless specified.

Legend

- EX BDY
- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- PR EXTENT WORK
- PR CLEAN WATER
- PR DIRTY WATER
- ESC CATCHMENT BDY
- PR STOCK PILES

Rev	Description	By	Date
C	FAST TRACK APP	MKS	06/2025
B	FAST TRACK APP	MKS	05/2025
A	FAST TRACK APP	DJM	04/2025

	By	Date
Survey	MAVEN	05/2024
Design	MKS	12/2024
Drawn	MKS	12/2024
Checked	DJM	06/2025

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Project

ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title

PROPOSED STAGE 1 EROSION & SEDIMENT CONTROL PLAN

Project no.	289001
Scale	1:2500 @ A3
Cad file	C200-EARTHWORKS.DWG
Drawing no.	C230-1 Rev C

RESOURCE CONSENT

DATE: 6/25/25 FILE PATH: F:\MAVEN\HAMILTON\PROJECTS\289001 - STATION ROAD\7 DRAWING\11 ASHBOURNE RESIDENTIAL\C200-EARTHWORKS.DWG

PROPOSED SRP POND 2C
CATCHMENT AREA: 49,751m²
SRP VOLUME: 1,493m³
DIMENSION: 16.00m X 48.01m
BOTTOM LEVEL: 68.3m
TOP LEVEL: 69.8m
EMERGENCY SPILLWAY: 16.00m X 0.13m

EXISTING CHANNEL

SRP POND TO BE DISCHARGED TO EXISTING CHANNEL

PROPOSED SRP POND 2D
CATCHMENT AREA: 29,682m²
SRP VOLUME: 890m³
DIMENSION: 11.84m X 35.51m
BOTTOM LEVEL: 66.7m
TOP LEVEL: 69.2m
EMERGENCY SPILLWAY: 11.84m X 0.13m

LOT 16 DP 562902
LOT 17 DP 562902
LOT 18 DP 562902
LOT 2 DP 21055
LOT 43 DP 393306
LOT 36 DP 393306
LOT 40 DP 393306
LOT 3 DP 463448

66.00
66.50
67.00
67.50
68.00
68.50
69.00
69.50
70.00
70.50
71.00
71.50
72.00

STAGE 3
STAGE 1

2D
2C
2B
2A

CHESTNUT LANE

TOP SOIL STOCK PILE FOR 10000m3 TO BE REUSED IN STAGE 2

PROPOSED SRP POND 2B
CATCHMENT AREA: 49,998m²
SRP VOLUME: 1,500m³
DIMENSION: 16.05m X 48.15m
BOTTOM LEVEL: 67m
TOP LEVEL: 68.5m
EMERGENCY SPILLWAY: 16.05m X 0.13m

PROPOSED HAUL ROAD

ELDONWOOD DRIVE

PROPOSED SRP POND 2A
CATCHMENT AREA: 48,796m²
SRP VOLUME: 1,464m³
DIMENSION: 15.83m X 47.49m
BOTTOM LEVEL: 69.3m
TOP LEVEL: 70.8m
EMERGENCY SPILLWAY: 15.83m X 0.13m

RESOURCE CONSENT

Notes
1. All works to be in accordance with Waikato Regional Council Erosion and Sediment Control: guidelines for soil disturbing activities TR 2009/02.
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9. Discharge from SRP Pond to be relied on soakage unless specified.

Legend
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- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- PR EXTENT WORK
- PR CLEAN WATER
- PR DIRTY WATER
- ESC CATCHMENT BDY
- PR STOCK PILES

Rev	Description	By	Date
C	FAST TRACK APP	MKS	06/2025
B	FAST TRACK APP	MKS	05/2025
A	DRAFT	MKS	12/2024

	By	Date
Survey	MAVEN	05/2024
Design	MKS	12/2024
Drawn	MKS	12/2024
Checked	DJM	06/2025

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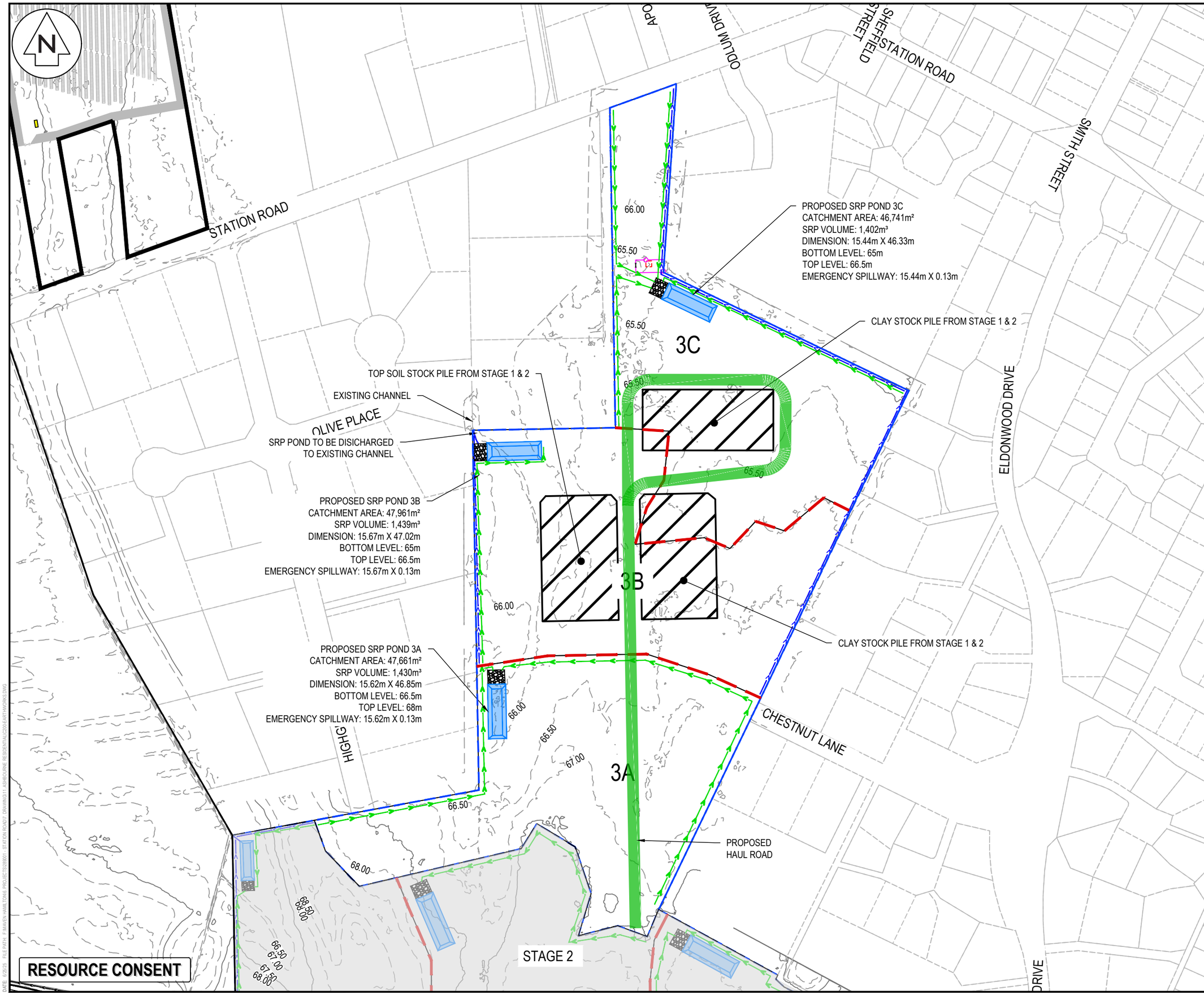
Project
ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title
PROPOSED STAGE 2 EROSION & SEDIMENT CONTROL PLAN

Project no.	289001
Scale	1:2500 @ A3
Cad file	C200-EARTHWORKS.DWG
Drawing no.	C230-2 Rev C

DATE: 6/25/25 FILE PATH: F:\MAVEN HAMILTON\PROJECTS\289001 - STATION ROAD\7 DRAWING\1 ASHBOURNE RESIDENTIAL\C200-EARTHWORKS.DWG



Notes

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9. Discharge from SRP Pond to be relied on soakage unless specified.

Legend

- EX BDY
- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- PR EXTENT WORK
- PR CLEAN WATER
- PR DIRTY WATER
- ESC CATCHMENT BDY
- PR STOCK PILES

Rev	Description	By	Date
C	FAST TRACK APP	MKS	06/2025
B	FAST TRACK APP	MKS	05/2025
A	DRAFT	MKS	12/2024

	By	Date
Survey	MAVEN	05/2024
Design	MKS	12/2024
Drawn	MKS	05/2025
Checked	DJM	06/2025

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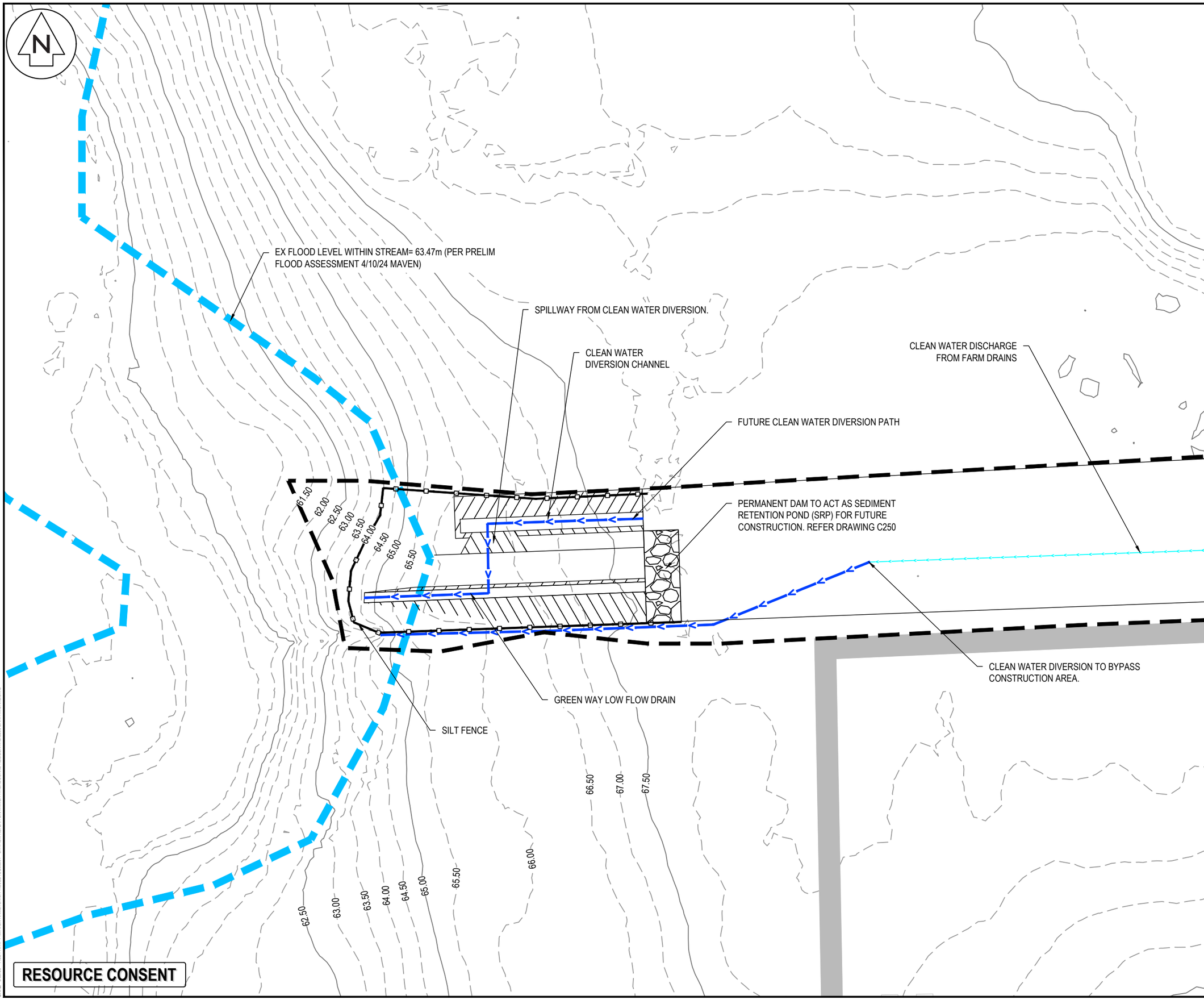
Project
ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title
PROPOSED STAGE 3 EROSION & SEDIMENT CONTROL PLAN

Project no.	289001
Scale	1:3000 @ A3
Cad file	C200-EARTHWORKS.DWG
Drawing no.	C230-3 Rev C

DATE: 6/25 FILE PATH: F:\MAVEN HAMILTON\PROJECTS\289001 - STATION ROAD\ DRAWING\1 ASHBOURNE RESIDENTIAL\200-EARTHWORKS.DWG



Notes

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Legend

- EX BDY
- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- PR EXTENT WORK
- PR CLEAN WATER
- PR DIRTY WATER
- PR DIRTY DAM / COFFER DAM
- PR SILT FENCE

Rev	Description	By	Date
C	FAST TRACK APP	NDL	06/2025
B	FAST TRACK APP	MKS	06/2025
A	FAST TRACK APP	NDL	05/2025

	By	Date
Survey	MAVEN	05/2024
Design	NDL	05/2025
Drawn	NDL	05/2025
Checked	DJM	06/2025

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Project

ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title

PROPOSED GREENWAY EROSION & SEDIMENT CONTROL PLAN STAGE 1

Project no.	289001		
Scale	1:500 @ A3		
Cad file	C200-EARTHWORKS.DWG		
Drawing no.	C230-4	Rev	C

CONNECT CLEAN WATER DIVERSION TO DISCHARGE IN STAGE 1

DAM TO BE USED IN STAGE 2 AS SEDIMENT RETENTION POND (SRP) TO SERVICE 1Ha WORKING AREA
CATCHMENT AREA: 10,000m²
SRP VOLUME: 300m³
BOTTOM LEVEL: 64.78m
TOP LEVEL: 66.0m

CLEAN WATER DIVERSION CHANNEL

CLEAN WATER DISCHARGE FROM FARM DRAIN

GREEN WAY LOW FLOW DRAIN

CLEAN WATER DIVERSION CHANNEL

CLEAN WATER DIVERSION TO BYPASS CONSTRUCTION AREA.

AT COMPLETION OF STAGE 2 DAM TO BE REFURBISHED AS COFFER DAM TO ALLOW FOR LOW FLOWS

CLEAN WATER DISCHARGE FROM FARM DRAIN (FD1)

CLEAN WATER DISCHARGE FROM FARM DRAIN (FD2)

CONNECT CLEAN WATER DIVERSION TO STAGE 1

66.50
67.00
67.50
68.00
68.50
69.00
69.50
70.00
70.50
71.00
71.50

RESOURCE CONSENT

Notes
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Rev	Description	By	Date
C	FAST TRACK APP	NDL	06/2025
B	FAST TRACK APP	MKS	06/2025
A	FAST TRACK APP	NDL	05/2025

	By	Date
Survey	MAVEN	05/2024
Design	NDL	05/2025
Drawn	NDL	06/2025
Checked	DJM	06/2025

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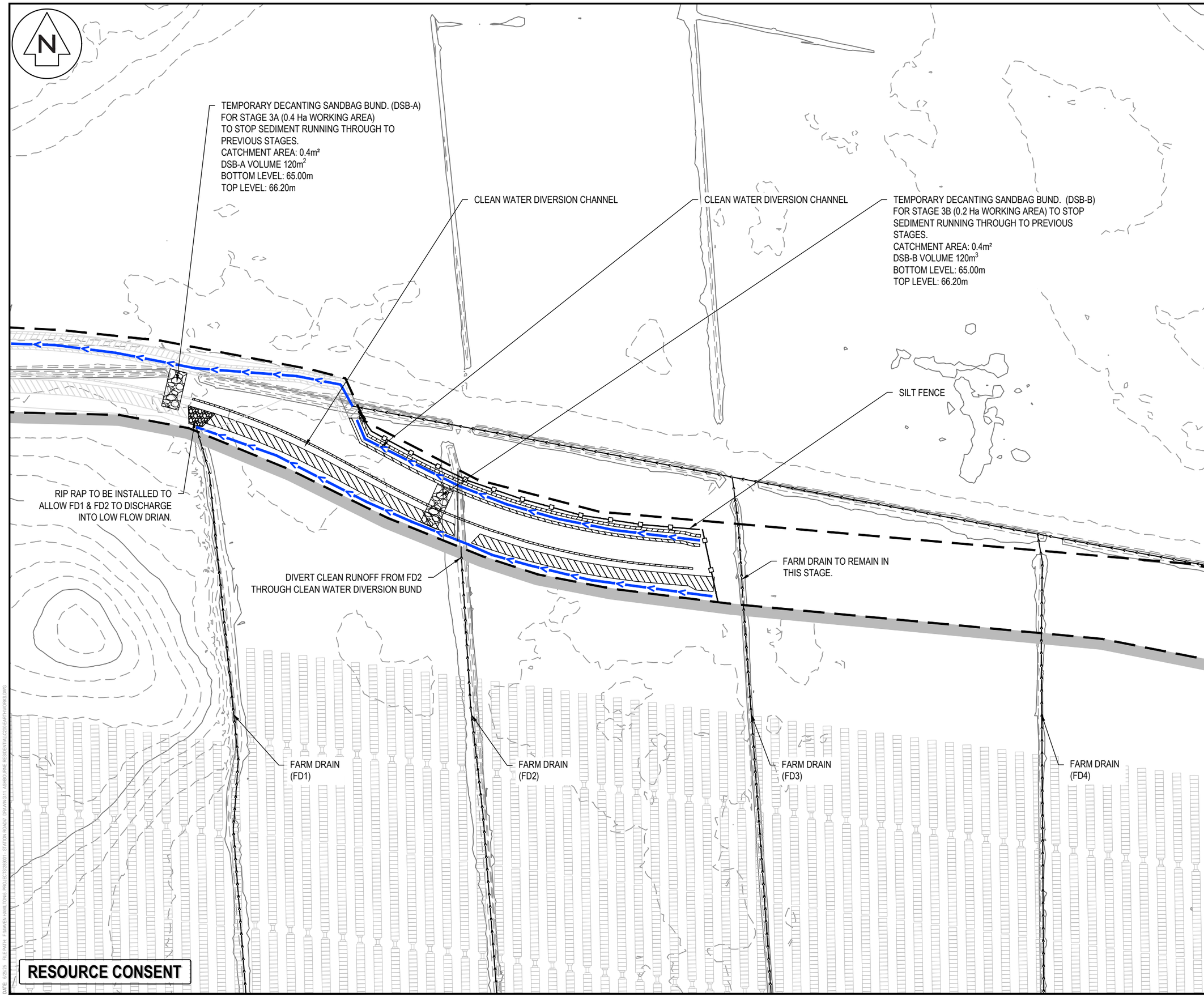
Project
ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title
PROPOSED GREENWAY EROSION & SEDIMENT CONTROL PLAN STAGE 2

Project no.	289001		
Scale	1:1000 @ A3		
Cad file	C200-EARTHWORKS.DWG		
Drawing no.	C230-5	Rev	C

DATE: 6/2025 FILEPATH: F:\MAVEN HAMILTON\PROJECTS\289001 STATION ROAD\7 DRAWING\11 ASHBOURNE RESIDENTIAL\C200-EARTHWORKS.DWG



RESOURCE CONSENT

DATE: 6/25/25 FILE PATH: P:\MAVEN HAMILTON\PROJECTS\289001 - STATION ROAD\7. DRAWINGS\1 ASHBOURNE RESIDENTIAL\C200-EARTHWORKS.DWG

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- PR DIRTY DAM / COFFER DAM
- PR SILT FENCE

Rev	Description	By	Date
C	FAST TRACK APP	NDL	06/2025
B	FAST TRACK APP	MKS	06/2025
A	FAST TRACK APP	NDL	05/2025

	By	Date
Survey	MAVEN	05/2024
Design	NDL	05/2025
Drawn	NDL	06/2025
Checked	DJM	06/2025

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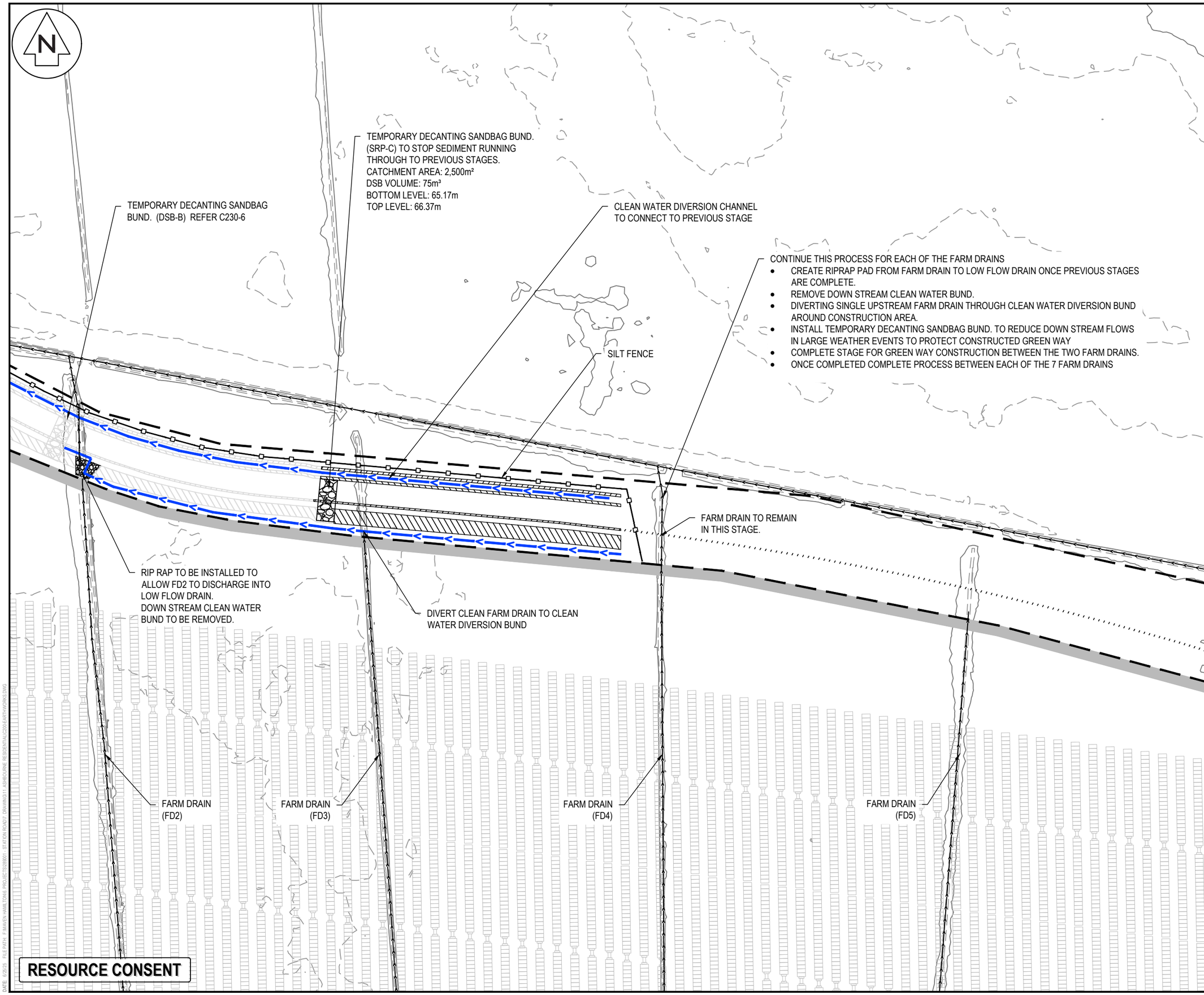
Project

ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title

PROPOSED GREENWAY EROSION & SEDIMENT CONTROL PLAN STAGE 3A

Project no.	289001		
Scale	1:1000 @ A3		
Cad file	C200-EARTHWORKS.DWG		
Drawing no.	C230-6	Rev	C



Notes

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- PR CLEAN WATER
- PR DIRTY WATER
- PR DIRTY DAM / COFFER DAM
- PR SILT FENCE

Rev	Description	By	Date
C	FAST TRACK APP	NDL	06/2025
B	FAST TRACK APP	MKS	06/2025
A	FAST TRACK APP	NDL	05/2025

	By	Date
Survey	MAVEN	05/2024
Design	NDL	05/2025
Drawn	NDL	06/2025
Checked	DJM	06/2025

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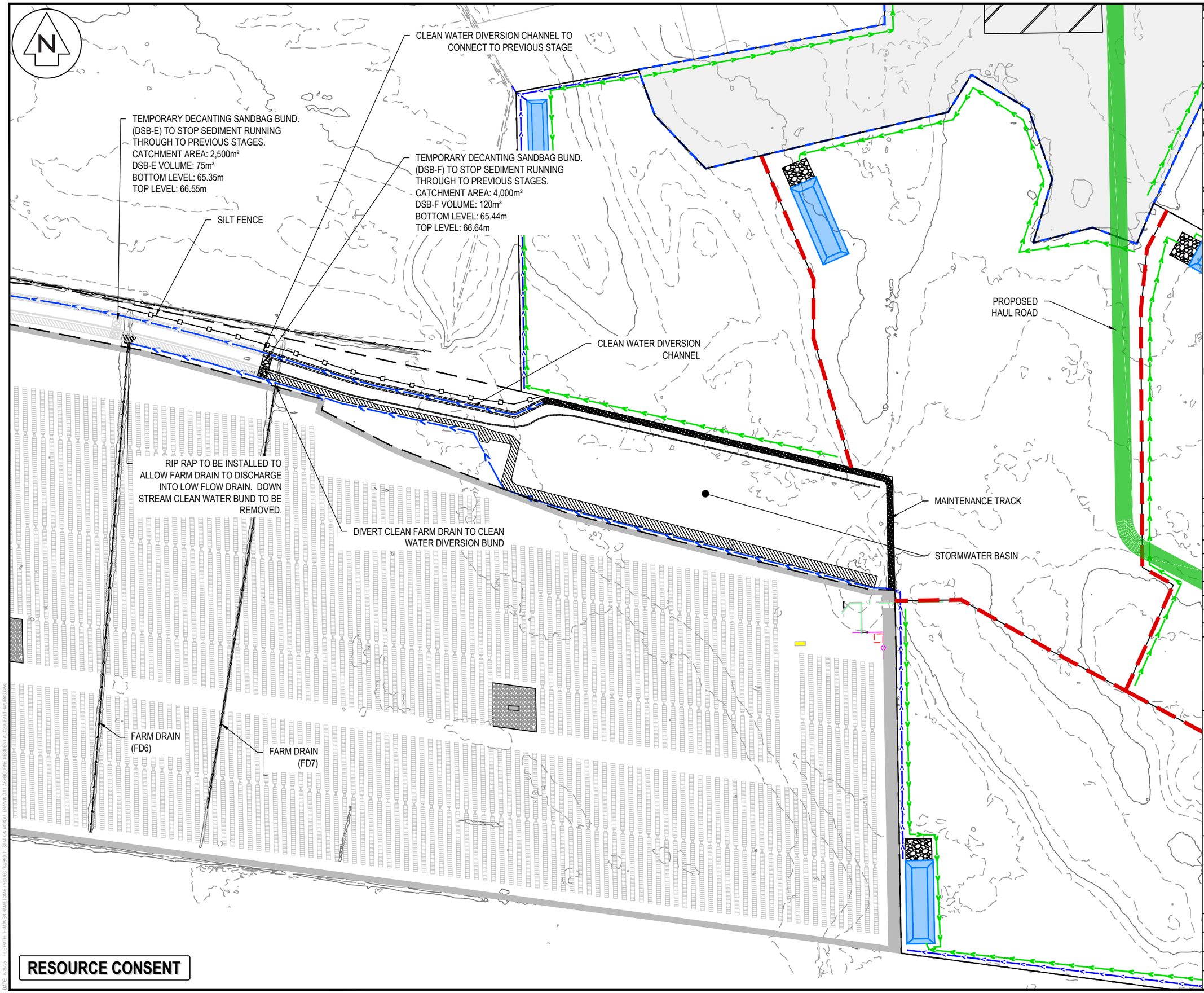
Project
ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title
PROPOSED GREENWAY EROSION & SEDIMENT CONTROL PLAN STAGE 3B

Project no.	289001		
Scale	1:1000 @ A3		
Cad file	C200-EARTHWORKS.DWG		
Drawing no.	C230-7	Rev	C



Notes

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Legend

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- PR MAJOR CONTOUR
- PR MINOR CONTOUR
- PR EXTENT WORK
- PR CLEAN WATER
- PR DIRTY WATER
- ESC CATCHMENT BDY
- PR STOCK PILES

Rev	Description	By	Date
C	FAST TRACK APP	NDL	06/2025
B	FAST TRACK APP	MKS	06/2025
A	FAST TRACK APP	NDL	05/2025

	By	Date
Survey	MAVEN	05/2024
Design	NDL	05/2025
Drawn	NDL	06/2025
Checked	DJM	06/2025

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Project

ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

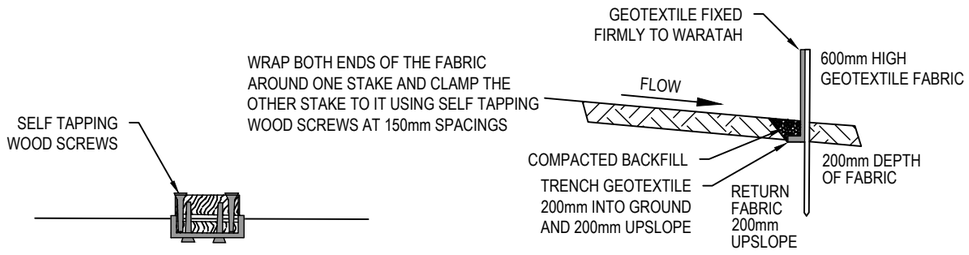
Title

PROPOSED GREENWAY EROSION & SEDIMENT STAGE 4

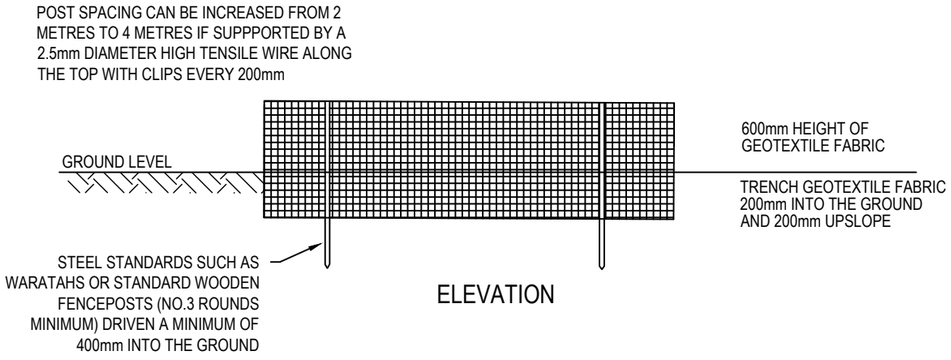
Project no.	289001
Scale	1:2000 @ A3
Cad file	C200-EARTHWORKS.DWG
Drawing no.	C230-8 Rev C

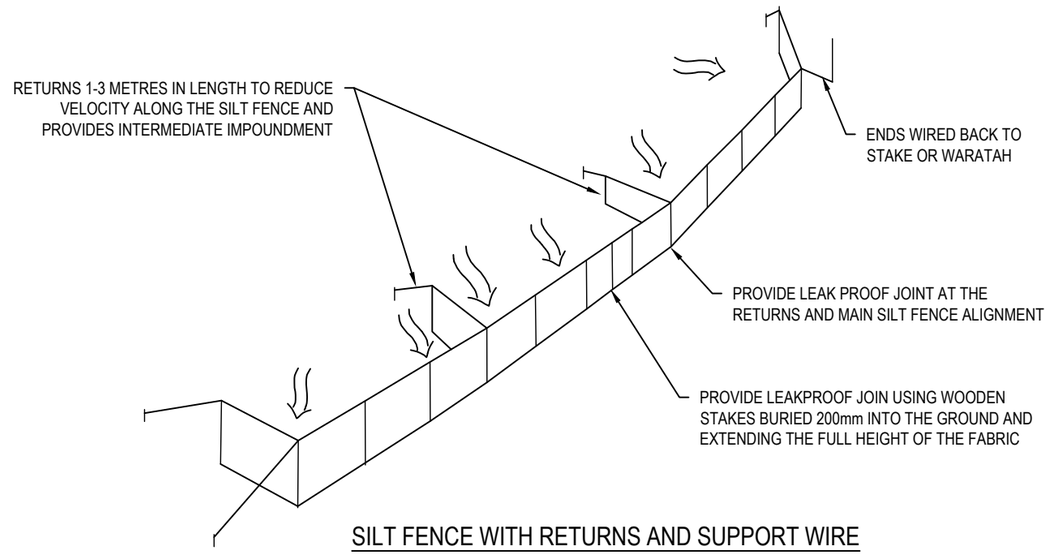
RESOURCE CONSENT

DATE: 6/25 FILEPATH: F:\MAVEN HAMILTON\PROJECTS\289001 STATION ROAD\ DRAWING\1 ASHBOURNE RESIDENTIAL\C200-EARTHWORKS.DWG



FABRIC JOIN





SILT FENCE WITH RETURNS AND SUPPORT WIRE

RESOURCE CONSENT

Rev	Description	By	Date
B	FAST TRACK APP	MKS	06/2025
A	DRAFT	MKS	12/2024

	By	Date
Survey	MAVEN	05/2024
Design	MKS	10/2024
Drawn	MKS	10/2024
Checked	DJM	06/2025

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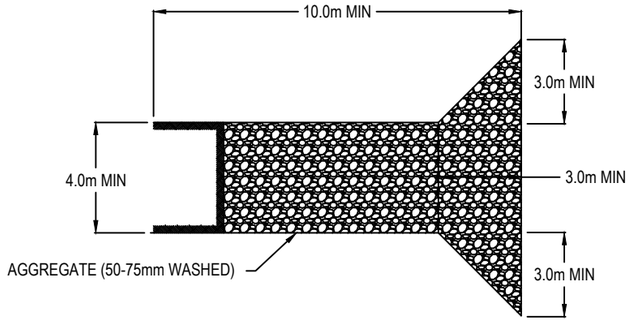
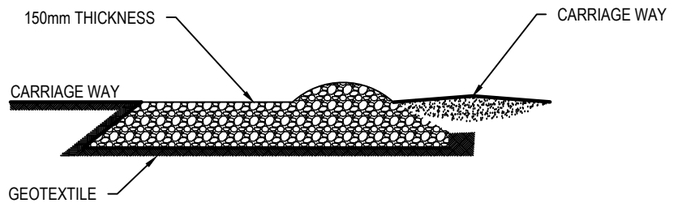
Project
ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title
PROPOSED EROSION & SEDIMENT CONTROL DETAILS

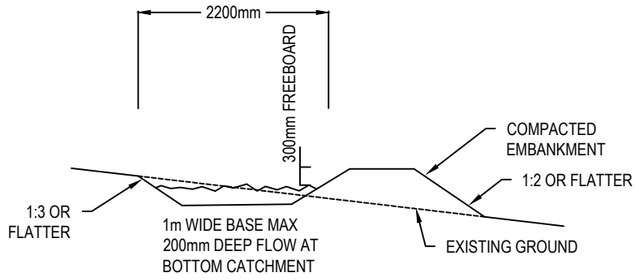
Project no.	289001		
Scale	-		
Cad file	C200-EARTHWORKS.DWG		
Drawing no.	C240-1	Rev	B



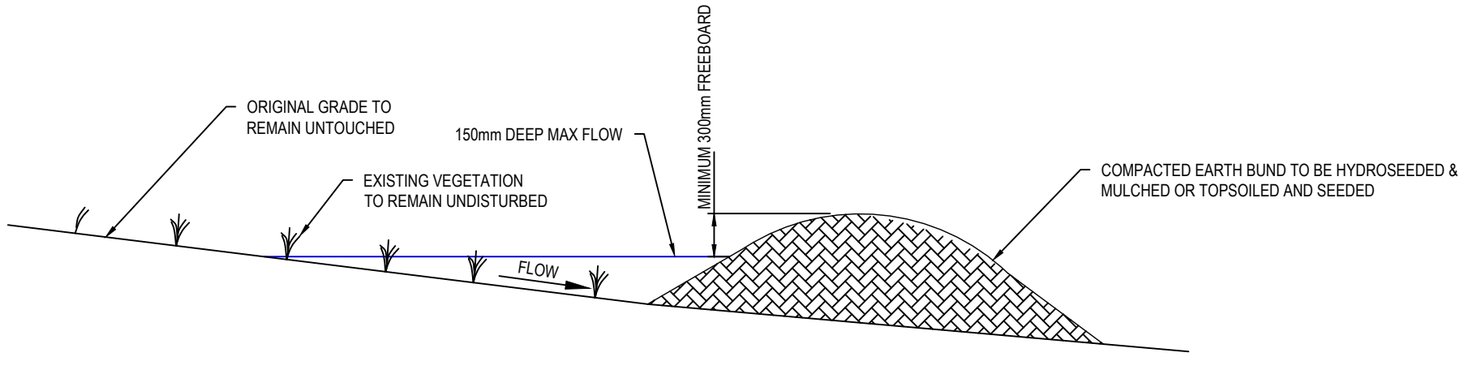
STABILISED VEHICLE ENTRANCE
PLAN VIEW



STABILISED VEHICLE ENTRANCE DETAIL
SIDE ELEVATION



TYPICAL CROSS SECTION OF A RUNOFF DIVERSION
TYPICAL DIMENSIONS UNLESS OTHERWISE NOTED



CLEAN WATER DIVERSION BUND DETAIL

RESOURCE CONSENT

Rev	Description	By	Date
B	FAST TRACK APP	MKS	06/2025
A	DRAFT	MKS	12/2024

	By	Date
Survey	MAVEN	05/2024
Design	MKS	10/2024
Drawn	MKS	10/2024
Checked	DJM	06/2025

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Project
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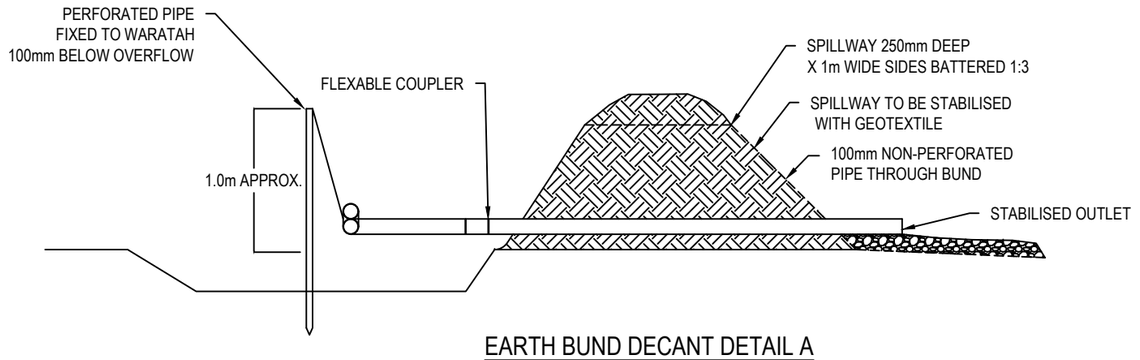
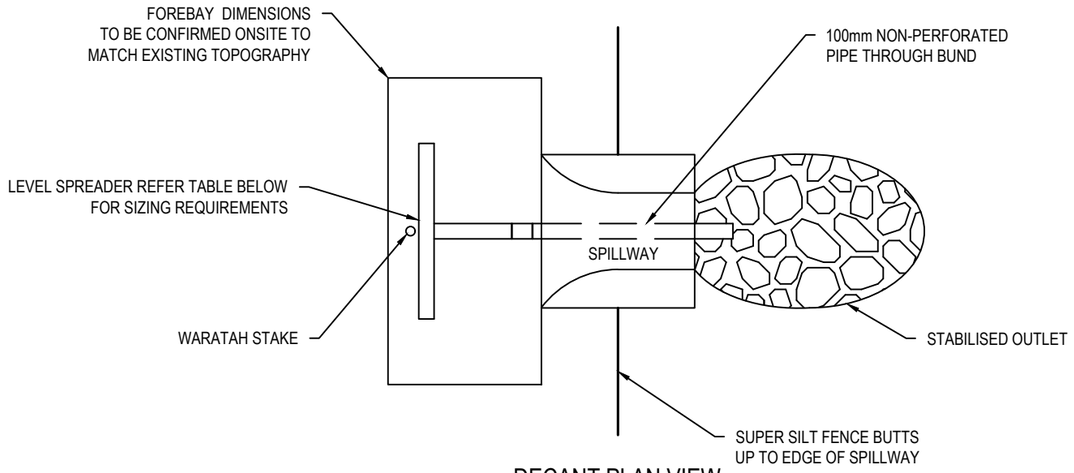
Title
PROPOSED EROSION & SEDIMENT CONTROL DETAILS

Project no.	289001		
Scale	-		
Cad file	C200-EARTHWORKS.DWG		
Drawing no.	C240-2	Rev	B



EARTH BUND DECANT DETAIL A
N.T.S



DECANT PLAN VIEW
N.T.S

LEVEL SPREADER DESIGN CRITERIA (20 YEAR STORM EVENT)				
DESIGN FLOW (m^3/sec)	INLET WIDTH (m)	DEPTH (m)	END WIDTH (m)	LENGTH (mm)
0-0.3	3	150	1	3
0.3-0.6	5	180	1	7
0.6-0.9	7	220	1	10

RESOURCE CONSENT

Rev	Description	By	Date
B	FAST TRACK APP	MKS	06/2025
A	DRAFT	MKS	12/2024

	By	Date
Survey	MAVEN	05/2024
Design	MKS	10/2024
Drawn	MKS	10/2024
Checked	DJM	06/2025

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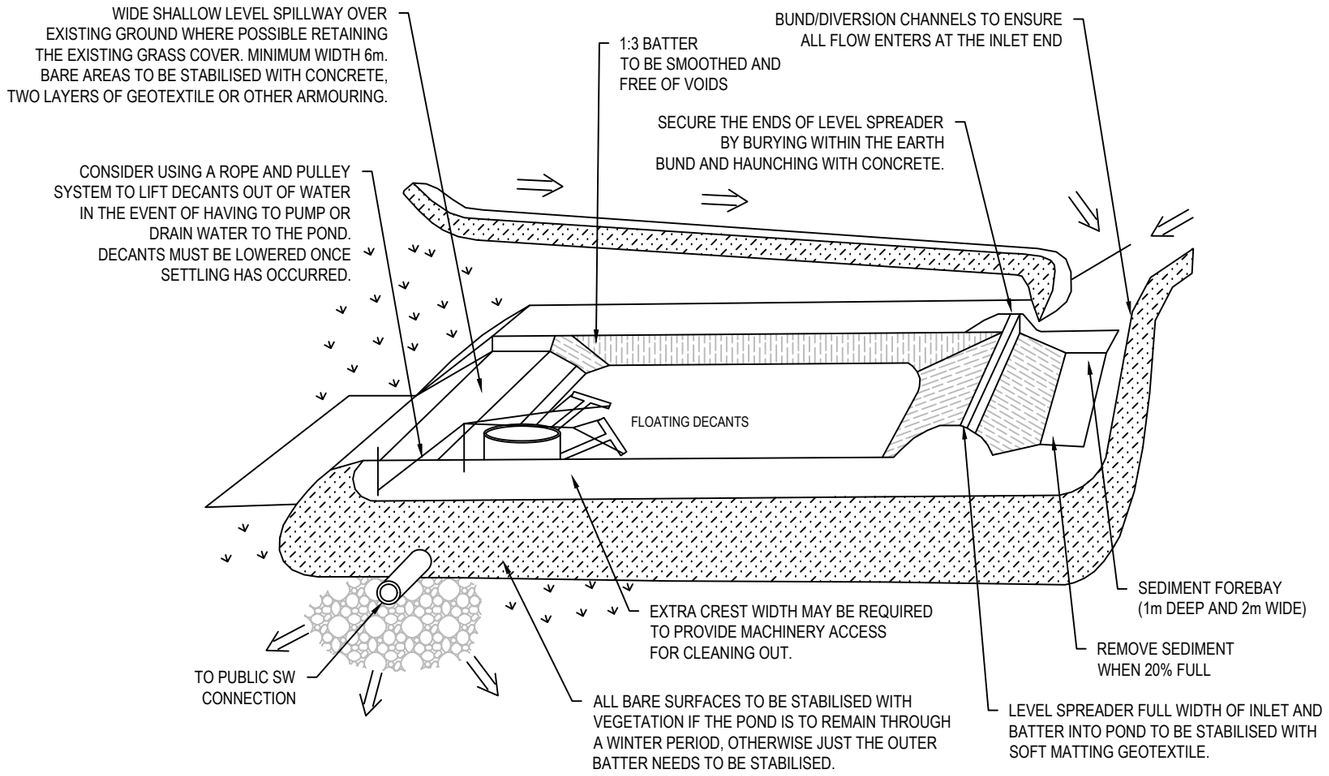
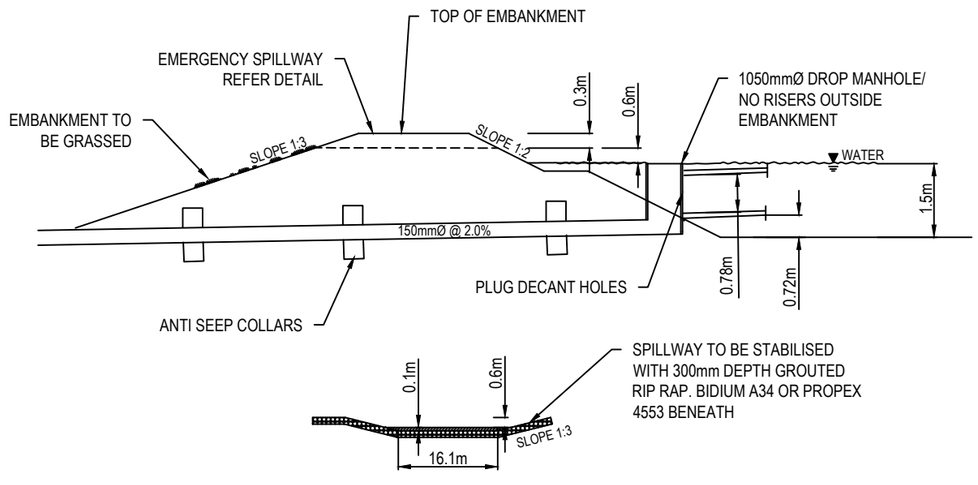
Project
ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title
PROPOSED EROSION & SEDIMENT CONTROL DETAILS

Project no.	289001		
Scale	-		
Cad file	C200-EARTHWORKS.DWG		
Drawing no.	C240-3	Rev	B



CROSS SECTION A-A OF SEDIMENT TREATMENT POND



EMERGENCY SPILLWAY

RESOURCE CONSENT

Rev	Description	By	Date
B	FAST TRACK APP	MKS	06/2025
A	DRAFT	MKS	12/2024

	By	Date
Survey	MAVEN	05/2024
Design	MKS	10/2024
Drawn	MKS	10/2024
Checked	DJM	06/2025

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Project
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Title
PROPOSED EROSION & SEDIMENT CONTROL DETAILS

Project no.	289001
Scale	-
Cad file	C200-EARTHWORKS.DWG
Drawing no.	C240-4 Rev B

EARTHWORKS CUT/FILL
(FROM FINISHED SUBGRADE
TO EXISTING SUBGRADE I.E EXCLUDES TOPSOIL)

CUT VOLUME (IN-SITU)	238,361m³
FILL VOLUME (IN-SITU)	217,935m³
REQ. CUT VOLUME (FACTOR 1.1)	239,729m³
SURPLUS OF CUT	1,368m³
TOPSOIL STRIPPED (300mm) =	136,156m³
EARTHWORKS AREA =	45.39ha

NOTE: NO ALLOWANCE FOR SERVICES
TRENCHES OR DRAINAGE SURPLUS

Notes
1. All works to be in accordance with Waikato Regional Council Erosion and Sediment Control: guidelines for soil disturbing activities TR 2009/02.
2. Co-ordinates in terms of NZ Geodetic Datum NZTM 2000.
3. Levels in terms of New Zealand Vertical Datum 2016.
4. Benchmark: IT I DPS 29877 RL: 65.51.
5. Boundaries are subject to final survey.
6. It is the Contractors responsibility to locate all services that may be affected by his operations.
7. The Contractors shall obtain all necessary approval from utility operators before commencing work under or near their services.
8. Contours are shown at 0.5m minor and 2.5m major.

Cut/Fill Table

Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-2.000	
2	-2.000	0.000	
3	0.000	2.000	
4	2.000	4.000	

Rev	Description	By	Date
A	FAST TRACK APP	MKS	04/2025

	By	Date
Survey	MAVEN	05/2024
Design	MKS	04/2025
Drawn	MKS	04/2025
Checked	DJM	04/2025

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Project
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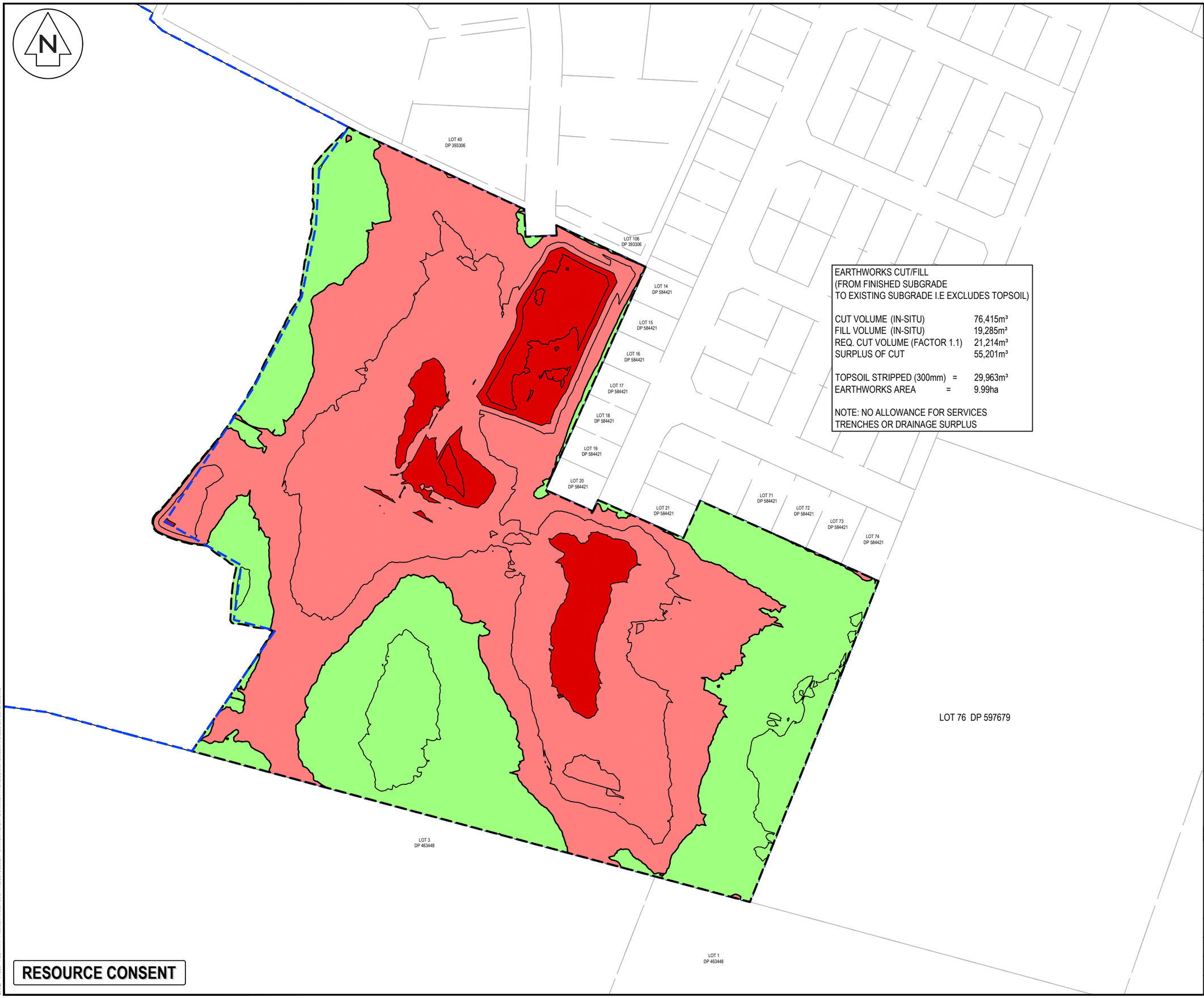
Title
PROPOSED CUT/FILL OVERVIEW PLAN

Project no.	289001		
Scale	1:6000 @ A3		
Cad file	C220-EW CUT&FILL.DWG		
Drawing no.	C220	Rev	A

RESOURCE CONSENT

DATE 4/1/25 FILEPATH P:\MAVEN HAMILTON\6 PROJECTS\289001 STATION ROAD\7 DRAWING\1 ASHBOURNE RESIDENTIAL\C220-EW CUT&FILL.DWG



EARTHWORKS CUT/FILL
(FROM FINISHED SUBGRADE
TO EXISTING SUBGRADE I.E EXCLUDES TOPSOIL)

CUT VOLUME (IN-SITU)	76,415m³
FILL VOLUME (IN-SITU)	19,285m³
REQ. CUT VOLUME (FACTOR 1.1)	21,214m³
SURPLUS OF CUT	55,201m³
TOPSOIL STRIPPED (300mm) =	29,963m³
EARTHWORKS AREA =	9.99ha

NOTE: NO ALLOWANCE FOR SERVICES
TRENCHES OR DRAINAGE SURPLUS

RESOURCE CONSENT

Notes

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2. Co-ordinates in terms of NZ Geodetic Datum NZTM 2000.
3. Levels in terms of New Zealand Vertical Datum 2016.
4. Benchmark: IT I DPS 29877 RL: 65.51.
5. Boundaries are subject to final survey.
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7. The Contractors shall obtain all necessary approval from utility operators before commencing work under or near their services.
8. Contours are shown at 0.5m minor and 2.5m major.

Cut/Fill Table

Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-2.000	
2	-2.000	0.000	
3	0.000	2.000	
4	2.000	4.000	

Rev	Description	By	Date
A	FAST TRACK APP	MKS	04/2025

	By	Date
Survey	MAVEN	05/2024
Design	MKS	04/2025
Drawn	MKS	04/2025
Checked	DJM	04/2025

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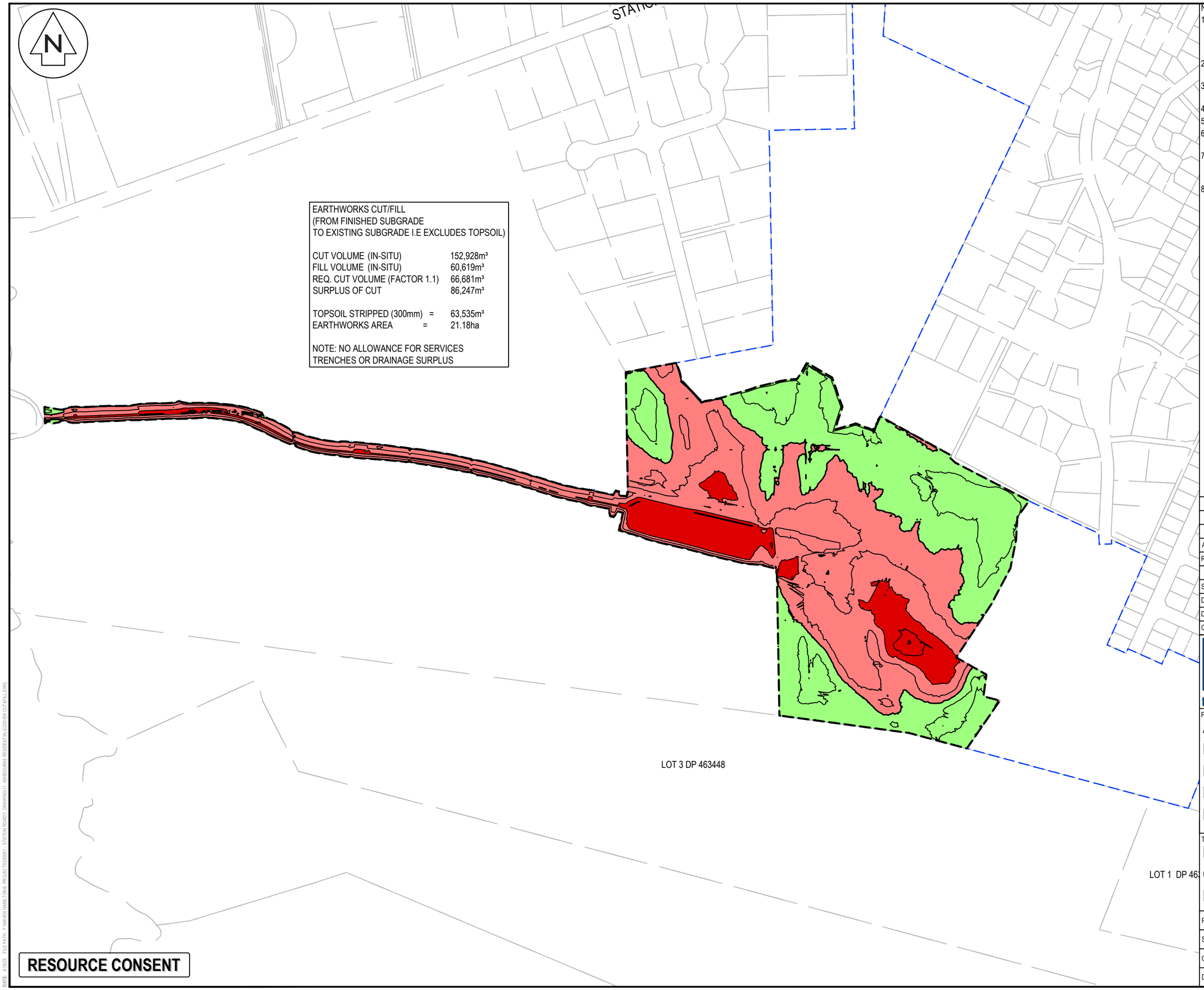
Project
ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title
PROPOSED CUT/FILL PLAN STAGE 1

Project no.	289001
Scale	1:2000 @ A3
Cad file	C220-EW CUT&FILL.DWG
Drawing no.	C220-1 Rev A



Notes

1. All works to be in accordance with Waikato Regional Council Erosion and Sediment Control: guidelines for soil disturbing activities TR 2009/02.
2. Co-ordinates in terms of NZ Geodetic Datum NZTM 2000.
3. Levels in terms of New Zealand Vertical Datum 2016.
4. Benchmark: IT I DPS 29877 RL: 65.51.
5. Boundaries are subject to final survey.
6. It is the Contractors responsibility to locate all services that may be affected by his operations.
7. The Contractors shall obtain all necessary approval from utility operators before commencing work under or near their services.
8. Contours are shown at 0.5m minor and 2.5m major.

Cut/Fill Table

Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-2.000	
2	-2.000	0.000	
3	0.000	2.000	
4	2.000	4.000	

Rev	Description	By	Date
A	FAST TRACK APP	MKS	04/2025

	By	Date
Survey	MAVEN	05/2024
Design	MKS	04/2025
Drawn	MKS	04/2025
Checked	DJM	04/2025

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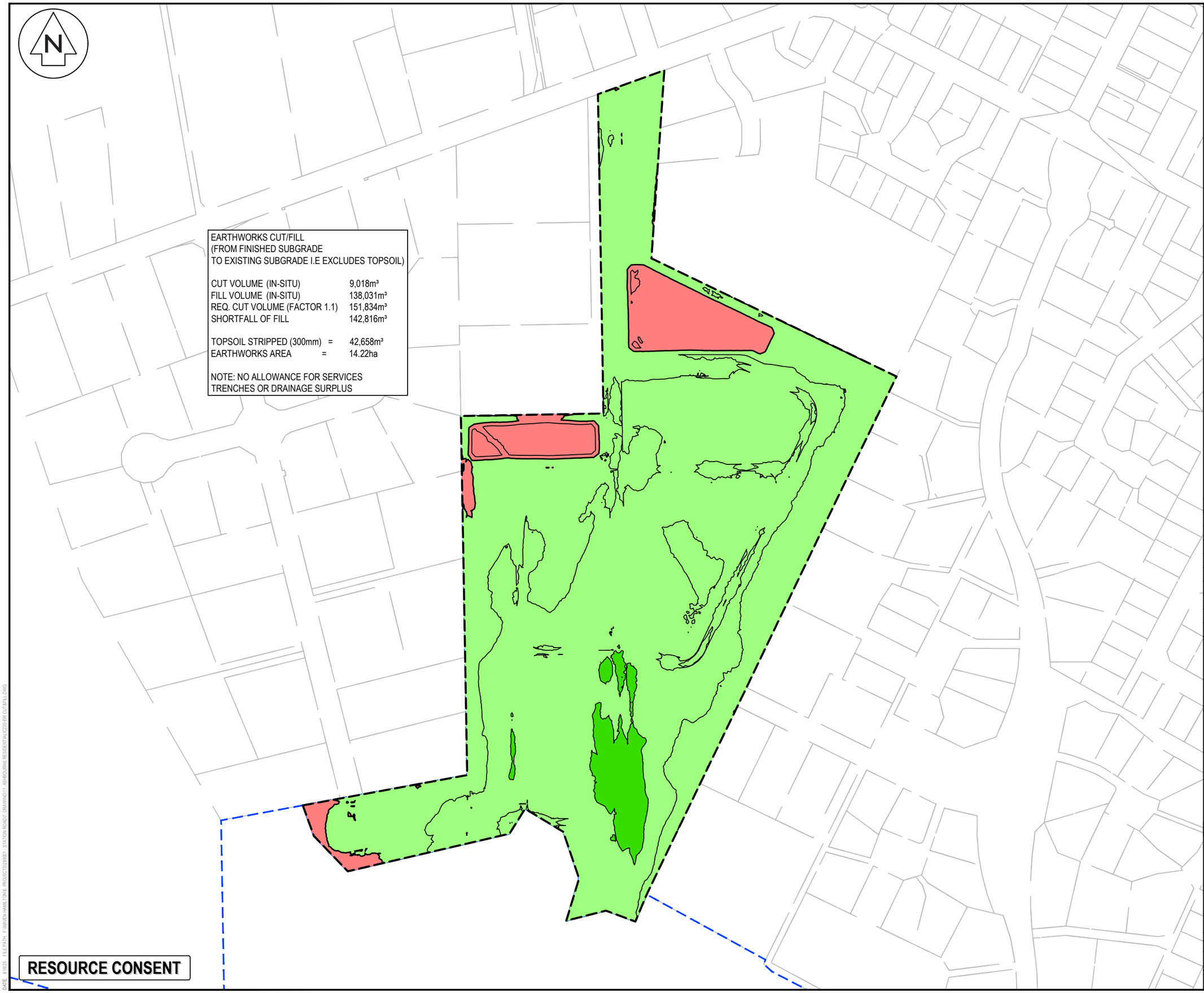
Project
ASHBOURNE RESIDENTIAL FOR MATAMATA DEVELOPMENTS LTD

Title
PROPOSED CUT/FILL PLAN STAGE 2

Project no.	289001		
Scale	1:5000 @ A3		
Cad file	C220-EW CUT&FILL.DWG		
Drawing no.	C220-2	Rev	A



EARTHWORKS CUT/FILL
(FROM FINISHED SUBGRADE
TO EXISTING SUBGRADE I.E EXCLUDES TOPSOIL)

CUT VOLUME (IN-SITU)	9,018m³
FILL VOLUME (IN-SITU)	138,031m³
REQ. CUT VOLUME (FACTOR 1.1)	151,834m³
SHORTFALL OF FILL	142,816m³
TOPSOIL STRIPPED (300mm) =	42,658m³
EARTHWORKS AREA =	14.22ha

NOTE: NO ALLOWANCE FOR SERVICES
TRENCHES OR DRAINAGE SURPLUS

RESOURCE CONSENT

Notes

1. All works to be in accordance with Waikato Regional Council Erosion and Sediment Control: guidelines for soil disturbing activities TR 2009/02.
2. Co-ordinates in terms of NZ Geodetic Datum NZTM 2000.
3. Levels in terms of New Zealand Vertical Datum 2016.
4. Benchmark: IT I DPS 29877 RL: 65.51.
5. Boundaries are subject to final survey.
6. It is the Contractors responsibility to locate all services that may be affected by his operations.
7. The Contractors shall obtain all necessary approval from utility operators before commencing work under or near their services.
8. Contours are shown at 0.5m minor and 2.5m major.

Cut/Fill Table

Number #	Minimum Elevation	Maximum Elevation	Color
1	-4.000	-2.000	
2	-2.000	0.000	
3	0.000	2.000	
4	2.000	4.000	

Rev	Description	By	Date
A	FAST TRACK APP	MKS	04/2025

	By	Date
Survey	MAVEN	05/2024
Design	MKS	04/2025
Drawn	MKS	04/2025
Checked	DJM	04/2025

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Project
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Title
PROPOSED CUT/FILL PLAN STAGE 3

Project no.	289001		
Scale	1:3000 @ A3		
Cad file	C220-EW CUT&FILL.DWG		
Drawing no.	C220-3	Rev	A