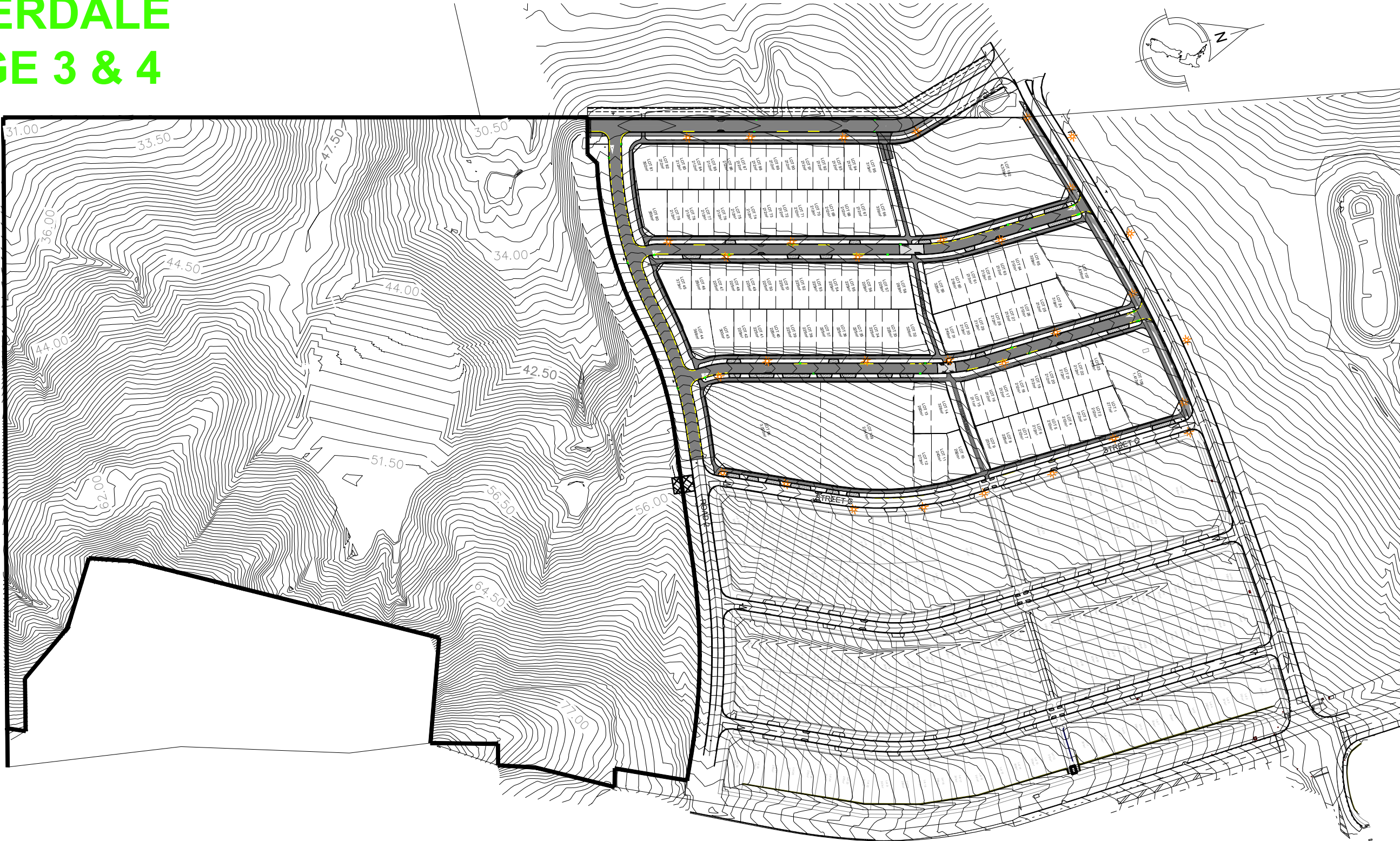


BUILD RICH LIMITED
PROPOSED EARTHWORKS
2182 EAST COAST ROAD
SILVERDALE
STAGE 3 & 4



Auckland Council
To Kaitiaki o Te Ora Kaitiaki

LUC60386771
Approved Resource Consent Plan
16/11/2021



EARTHWORKS RESOURCE CONSENT DRAWINGS:

PRELIMINARY & GENERAL

PG101	COVER SHEET
PG102	CONTENTS PAGE
PG103	EXISTING CONTOUR PLAN

EARTHWORKS

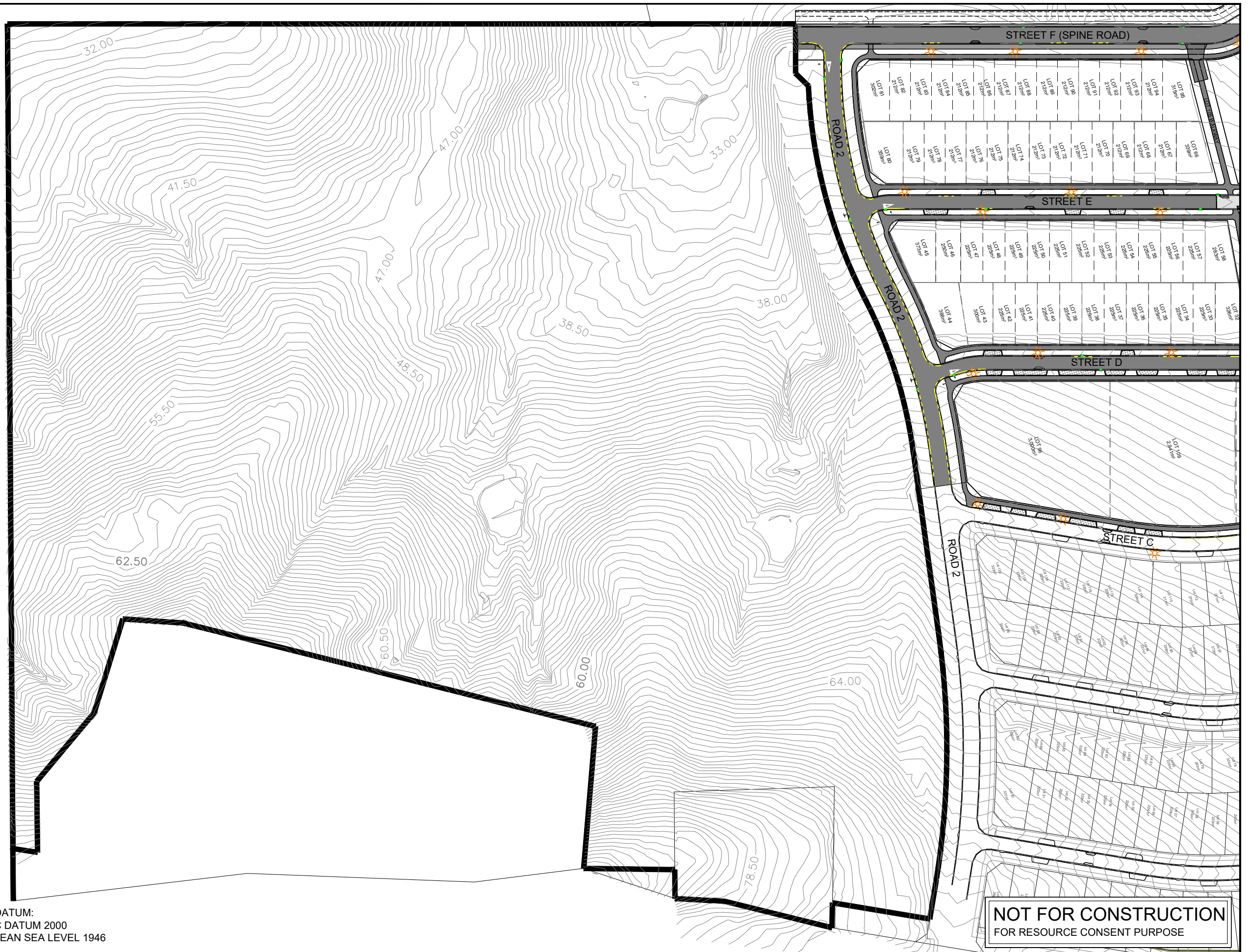
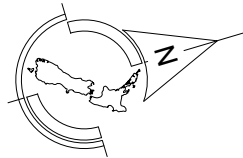
EW201	PROPOSED CONTOUR PLAN
EW202	PROPOSED CUT TO FILL CONTOUR PLAN
EW203	EROSION AND SEDIMENT CONTROL PLAN
EW204-8	EROSION AND SEDIMENT CONTROL DETAILS

EARTHWORKS SECTIONS

XS301-302	PROPOSED EARTHWORKS SECTIONS
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NOT FOR CONSTRUCTION
FOR RESOURCE CONSENT PURPOSE

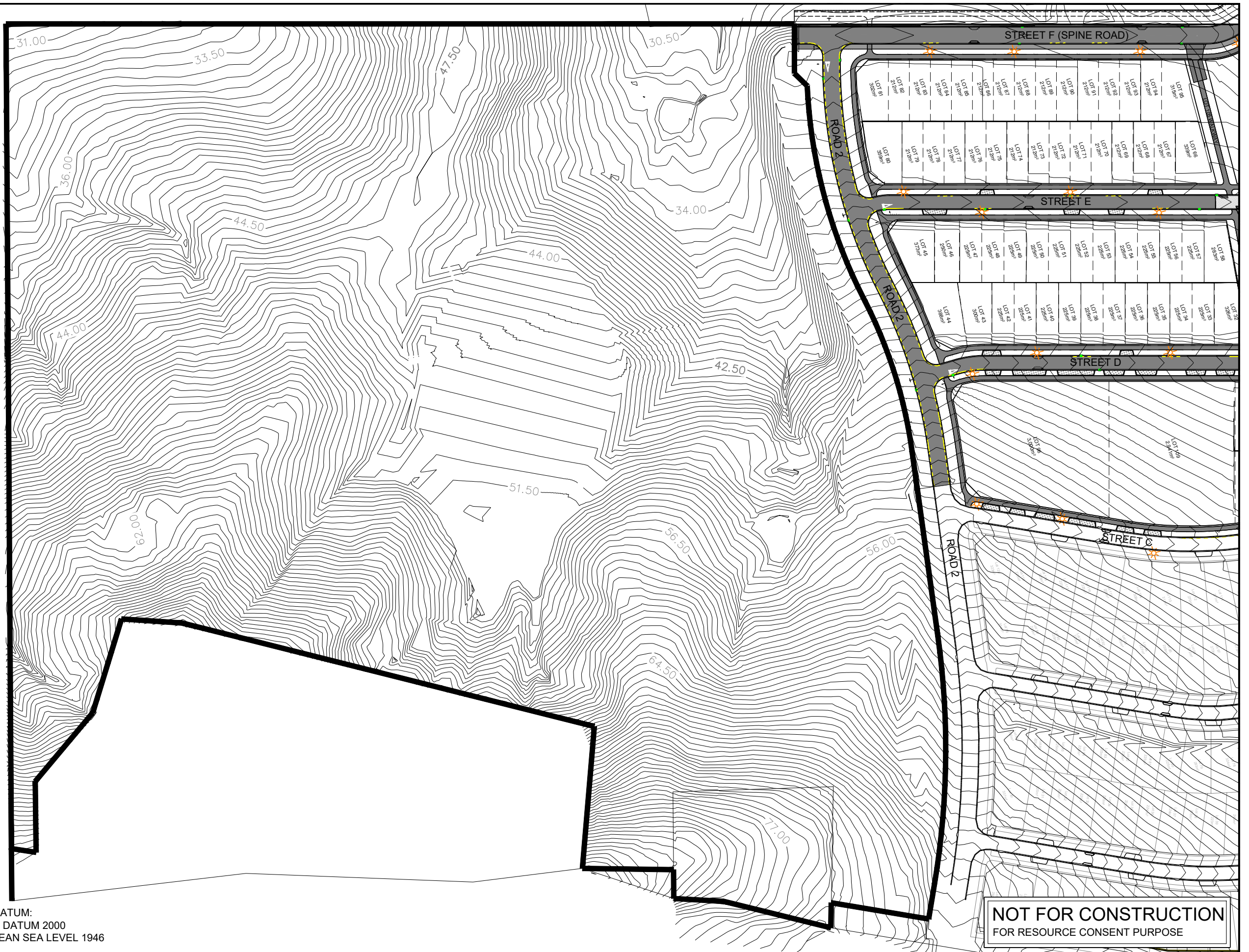
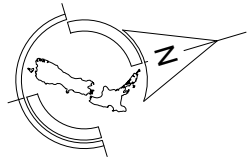
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						NAME DATE	BUILD RICH LIMITED	2182 EAST COAST ROAD SILVERDALE (STAGE 3 & 4)	1625 - RC - PG102			Ph: 09 426 6552 Web: www.aspeng.co.nz
					DESIGN	PF 07.2021						
					DRAWN	KC 07.2021						
					DRAWING CHECK	PF 07.2021						
					DESIGN CHECK	PF 07.2021						
					APPROVED	PF 07.2021	Conditions of Use: These drawings shall only be used for the purpose for which they were supplied. Do not measure off this drawing. If doubt please contact Engineer.	DRAWING TITLE		JULY 2021	-	
								CONTENT PAGE				



NOTE:
ALL LEVELS IN TERMS OF LINZ DATUM:
HORIZONTAL DATUM: GEODETIC DATUM 2000
VERTICAL DATUM: AUCKLAND MEAN SEA LEVEL 1946

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FOR RESOURCE CONSENT PURPOSE

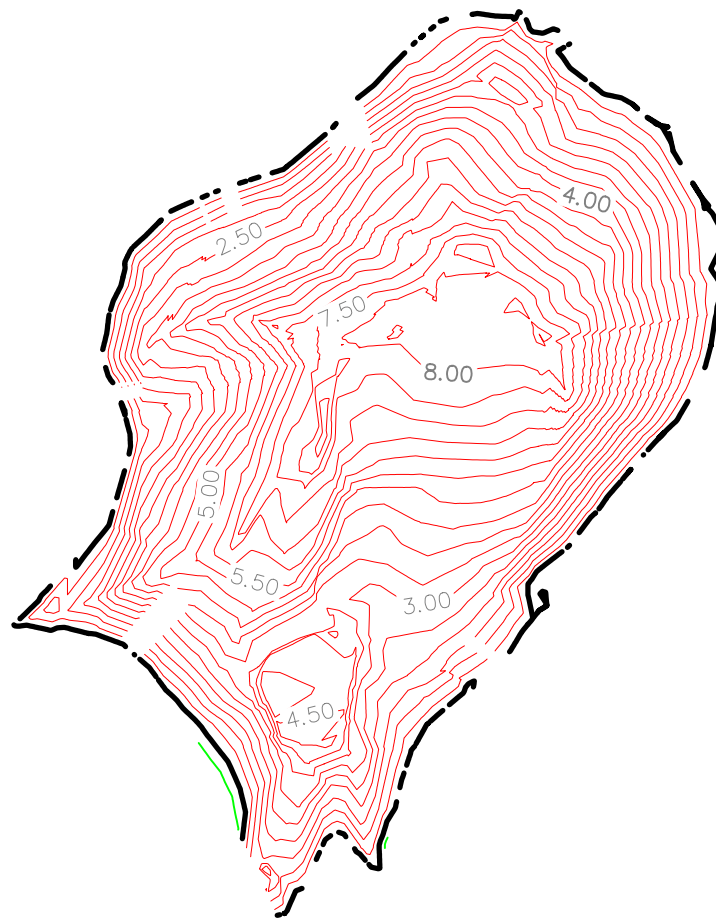
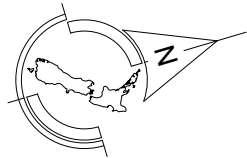
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					DRAWN	KC	07.2021							
					DRAWING CHECK	PF	07.2021	Conditions of Use: These drawings shall only be used for the purpose for which they were supplied. Do not measure off this drawing. If doubt please contact Engineer.	DRAWING TITLE EXISTING CONTOUR PLAN			JULY 2021	-	Ph: 09 426 6552 Web: www.aspeng.co.nz
					DESIGN CHECK	PF	07.2021							
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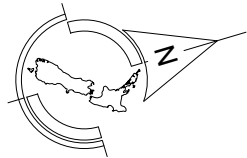


NOTE:
ALL LEVELS IN TERMS OF LINZ DATUM:
HORIZONTAL DATUM: GEODETIC DATUM 2000
VERTICAL DATUM: AUCKLAND MEAN SEA LEVEL 1946

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REV.	DESCRIPTION	CHECK	APP'D	DATE	SCALE 1:1500 AT A3			CLIENT	SITE ADDRESS	DRAWING NUMBER		DATE	REVISION	
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					DRAWN	KC	07.2021							
					DRAWING CHECK	PF	07.2021	Conditions of Use: <i>These drawings shall only be used for the purpose for which they were supplied. Do not measure off this drawing. If doubt please contact Engineer.</i>	DRAWING TITLE PROPOSED CONTOUR PLAN					
					DESIGN CHECK	PF	07.2021							
					APPROVED	PF	07.2021							





EXISTING CULVERT CROSSING
(APPROXIMATE LOCATION)

PROPOSED TWIN 450mmØ
BOSSPIPE CULVERTS

LEGEND:

- DIRTY WATER DIVERSION BUND 
- CLEAN WATER DIVERSION BUND 
- SILT FENCE 
- PROPOSED SEDIMENT RETENTION POND 
- PROPOSED STABILISED ENTRANCE 
- INDICATIVE HAUL ROAD FROM 17 SMALL RD 

NOTE:

- PLEASE REFER ASPIRE DRAWING 1625-RC-EW204-EW208 FOR SEDIMENT CONTROL DETAILING.
- CONTOUR DRAINS TO BE INSTALLED AT 20m SPACING
- APPROX. 0.5-1m DEEP, 1m WIDE DROP-OUT PITS TO BE INSTALLED WITHIN THE DIRTY WATER DIVERSION BUNDS.

NOTE:

ALL LEVELS IN TERMS OF LINZ DATUM:
HORIZONTAL DATUM: GEODETIC DATUM 2000
VERTICAL DATUM: AUCKLAND MEAN SEA LEVEL 1946

PROPOSED SEDIMENT
RETENTION POND
APPROX. 1.4 HA CATCHMENT

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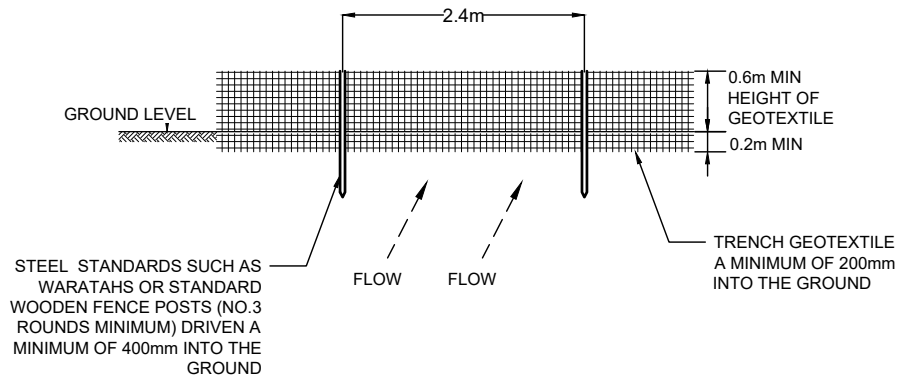
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A	INDICATIVE HAUL ROAD ADDED			09.21		NAME	BUILD RICH LIMITED	2182 EAST COAST ROAD SILVERDALE (STAGE 3 & 4)	1625 - RC - EW203
B	HAUL ROAD UPDATED	MJ	MJ	1.11.21	DESIGN	HR			
					DRAWN	HR			
					DRAWING CHECK	PF	Conditions of Use: These drawings shall only be used for the purpose for which they were supplied. Do not measure off this drawing. If doubt please contact Engineer.	DRAWING TITLE EROSION AND SEDIMENT CONTROL PLAN	DATE JULY 2021
					DESIGN CHECK	PF			
					APPROVED	PF			
Auckland Council Approved Resource Consent Plan LUC60386771 16/11/2021 Page 6 of 13									

ASPIRE
CONSULTING ENGINEERS

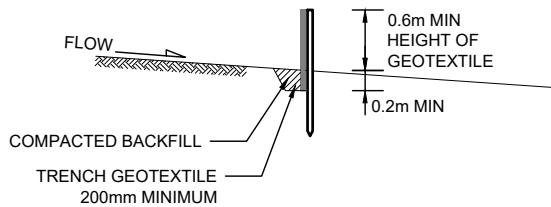
Ph: 09 426 6552
Web: www.aspeng.co.nz

Slope steepness %	Slope length (m) (maximum)	Spacing of returns (m)	Silt fence length (m) (maximum)
Flatter than 2%	Unlimited	N/A	Unlimited
2 – 10%	40	60	300
10 – 20%	30	50	230
20 – 33%	20	40	150
33 – 50%	15	30	75
> 50%	6	20	40

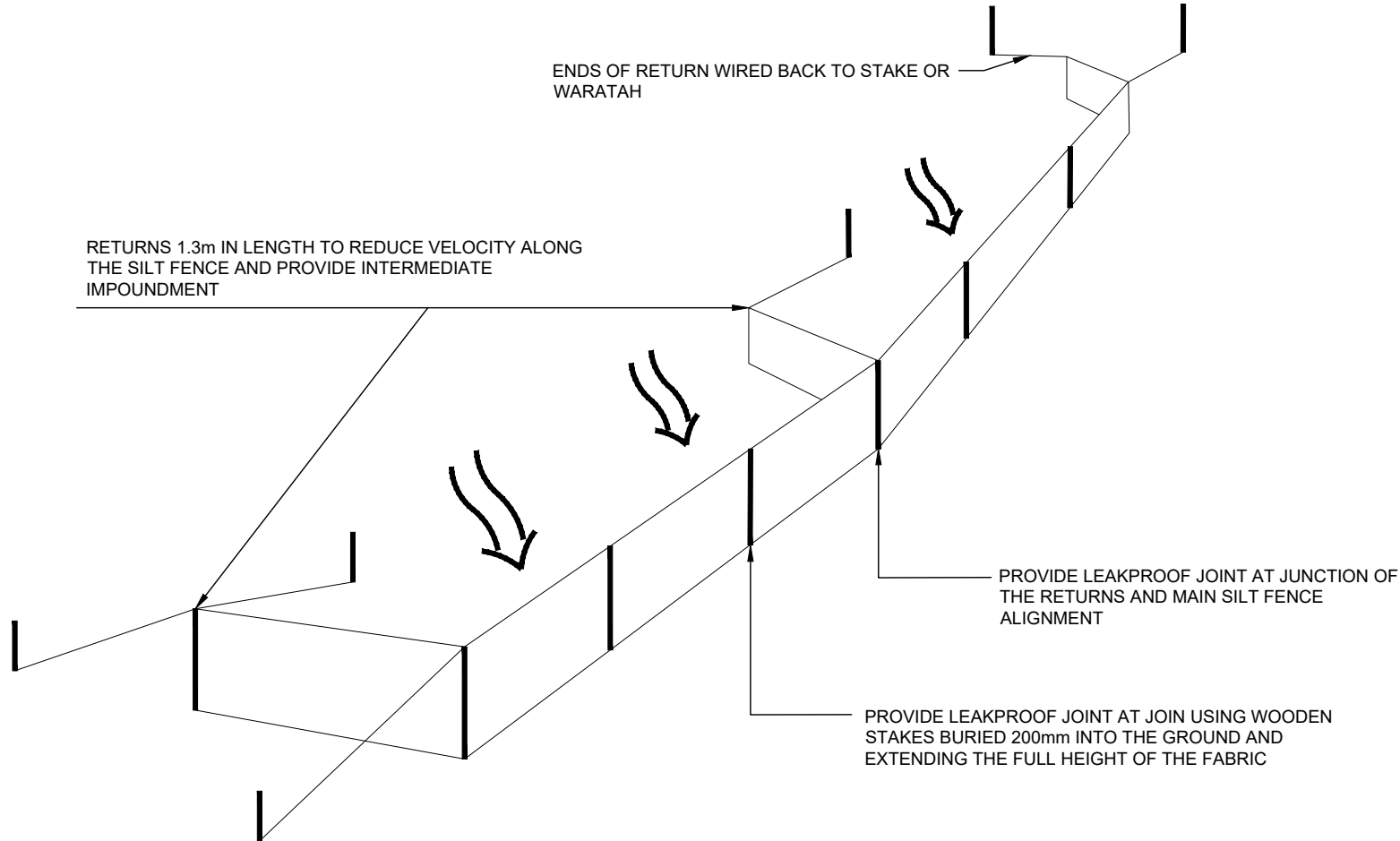
SILT FENCE DESIGN CRITERIA TABLE



SILT FENCE ELEVATION



SILT FENCE CROSS-SECTION



SILT FENCE WITH RETURNS AND SUPPORT WIRE

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FOR RESOURCE CONSENT PURPOSE

REFER TO AUCKLAND COUNCIL
GD-05 FOR FURTHER DETAILS

REV.	DESCRIPTION	CHECK	APP'D	DATE	SCALE	NTS	NAME	DATE
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						DRAWN	HR	07.21
						DRAWING CHECK	PF	07.21
						DESIGN CHECK	PF	07.21
						APPROVED	PF	07.21

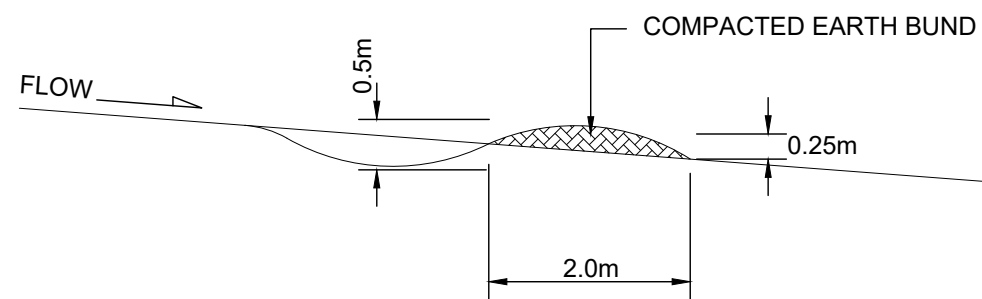
CLIENT	BUILD RICH LIMITED
SITE ADDRESS	2182 EAST COAST ROAD SILVERDALE (STAGE 3 & 4)
DRAWING TITLE	EROSION AND SEDIMENT CONTROL PLAN

DRAWING NUMBER	1625 - RC - EW204
DATE	JULY 2021
REVISION	-

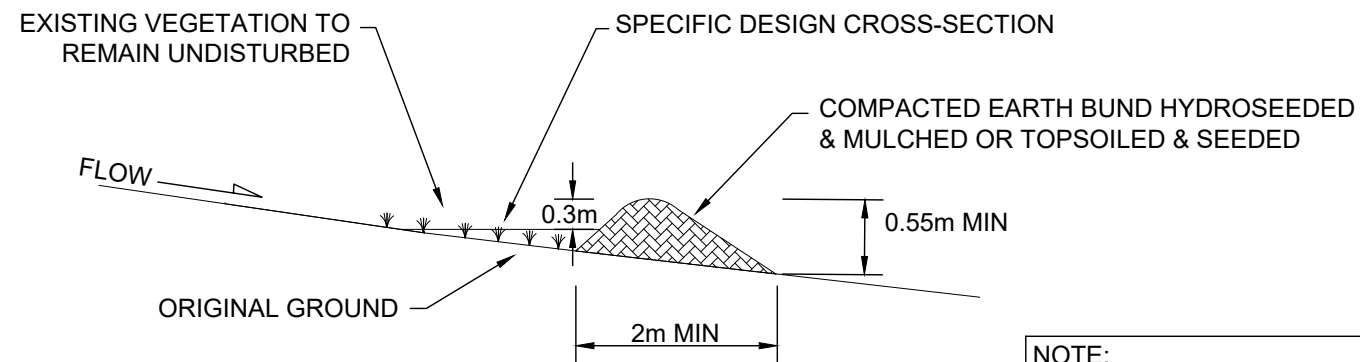
Ph: 09 426 6552
Web: www.aspeng.co.nz

CONTOUR DRAIN SPACING	
SLOPE OF SITE (%)	SPACING (m) OF CONTOUR DRAINS
LESS THAN 5%	50
5 - 10%	40
10 - 15%	30
15 - 30%	20

CATCHMENT (ha)		5	10	15	20	30
		DESIGN FLOW DEPTH (m)				
CHANNEL SLOPE %	1-2	0.45	0.60	0.70	0.75	0.90
	2-5	0.40	0.55	0.60	0.70	0.80
	5-10	0.35	0.45	0.50	0.60	0.65
	10-20	0.30	0.40	0.45	0.50	0.60
	20-40	0.30	0.35	0.40	0.45	0.50



CONTOUR DRAIN CROSS-SECTION



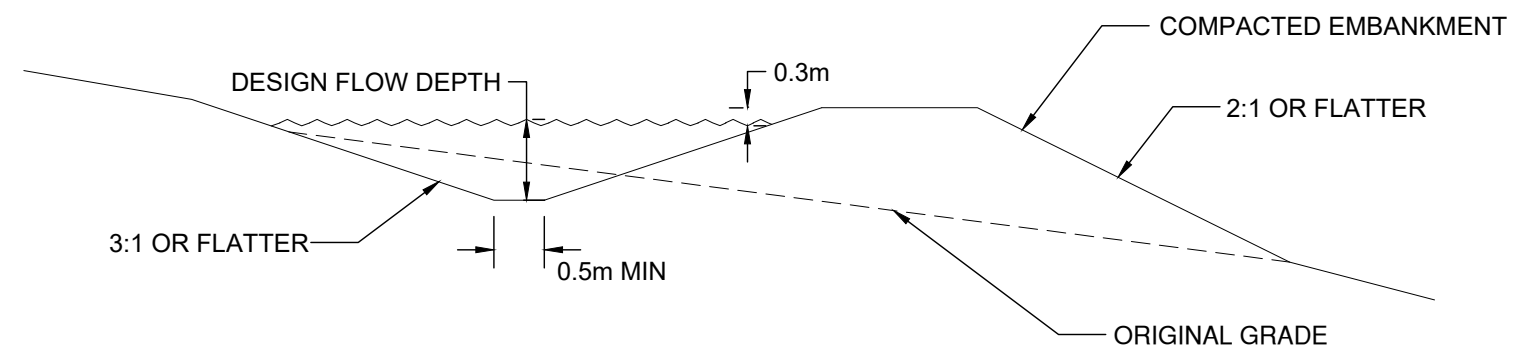
CLEAN WATER DIVERSION CROSS-SECTION

NOTE:

- THE DIVERSION CHANNELS SHOULD BE PARABOLIC OR TRAPEZOIDAL IN SHAPE
- ENSURE INTERNAL SIDES OF THE BUND ARE NO STEEPER THAN 3:1, AND EXTERNAL SIDES NO STEEPER THAN 2:1, AS OUTLINED BELOW

DIRTY WATER DIVERSION
FOR CONSTRUCTION AND OPERATION OF DIRTY WATER DIVERSION CHANNELS AND BUNDS:

- PLAN AND CONSTRUCT ALL DIRTY WATER DIVERSION WORKS AS PART OF THE INITIAL SITE ESTABLISHMENT/ DEVELOPMENT ACTIVITIES
- DEFINE THE ROUTE AND SURVEY IT TO ACHIEVE THE CORRECT GRADIENT
- CONSTRUCT DRAINS WITH A UNIFORM GRADE ALONG THE INVERT, AS SUDDEN DECREASES MAY CAUSE SEDIMENT TO ACCUMULATE CAUSING THE BANK TO OVERTOP
- ENSURE THE BUNDS ASSOCIATED WITH THE DIVERSIONS ARE WELL COMPACTED AND STABILISED. IN SOME INSTANCES, THIS MAY REQUIRE SPECIFIC GEOTECHNICAL DESIGN TO ENSURE THE STABILITY AND INTEGRITY OF THE STRUCTURE
- MONITOR DIVERSIONS FOR EROSION. SUBJECT TO THE SOILS ON SITE IT IS LIKELY THAT EROSION CONTROL WILL BE NEEDED WHERE THE GRADIENTS ARE GREATER THAN 2% OR WHERE THE DESIGN VELOCITIES EXCEED 1m/SEC
- ENSURE THE FINISHED CROSS-SECTION MEETS ALL DESIGN REQUIREMENTS
- PROVIDE AN ADEQUATE OUTLET FOR EACH DIVERSION (i.e DIRTY WATER TO A SEDIMENT CONTROL DEVICE).



DIRTY WATER DIVERSION CROSS-SECTION

CATCHMENT (ha)		1	2	3	4	5
		DESIGN FLOW DEPTH (m)				
CHANNEL SLOPE %	1-2	0.20	0.25	0.30	0.35	0.35
	2-5	0.15	0.20	0.25	0.30	0.30
	5-10	0.15	0.15	0.20	0.25	0.25
	10-20	0.10	0.15	0.15	0.20	0.20
	20-40	0.10	0.15	0.15	0.20	0.20

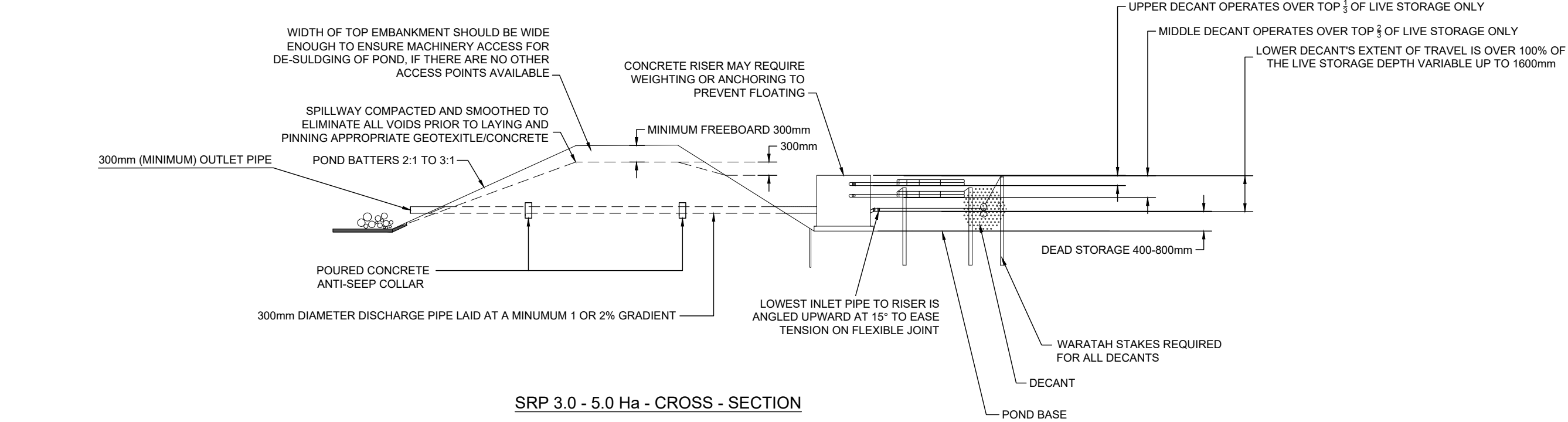
NOTE: BASED ON 0.5m WIDE BASE WITH 1:3 SIDE SLOPES

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FOR RESOURCE CONSENT PURPOSE

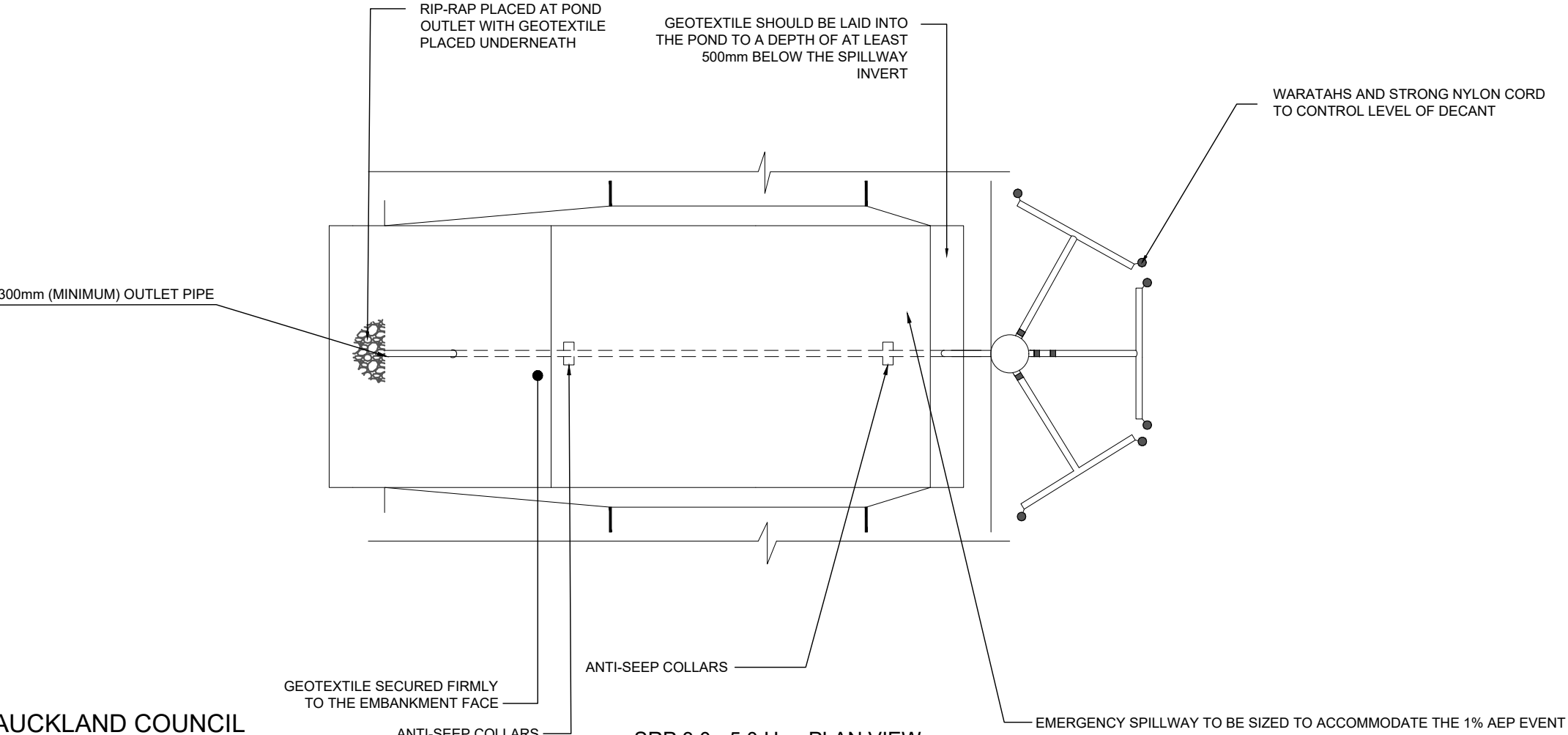
REFER TO AUCKLAND COUNCIL
GD-05 FOR FURTHER DETAILS

REV.	DESCRIPTION	CHECK	APP'D	DATE	SCALE	NTS	NAME	DATE	CLIENT	SITE ADDRESS	DRAWING NUMBER	DATE	REVISION	 Ph: 09 426 6552 Web: www.aspeng.co.nz
									BUILD RICH LIMITED	2182 EAST COAST ROAD SILVERDALE (STAGE 3 & 4)	1625 - RC - EW205			
									Conditions of Use: These drawings shall only be used for the purpose for which they were supplied. Do not measure off this drawing. If doubt please contact Engineer.	DRAWING TITLE EROSION AND SEDIMENT CONTROL PLAN		JULY 2021	-	

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SRP 3.0 - 5.0 Ha - CROSS - SECTION



SRP 3.0 - 5.0 Ha - PLAN VIEW

REFER TO AUCKLAND COUNCIL
GD-05 FOR FURTHER DETAILS

REV.	DESCRIPTION	CHECK	APP'D	DATE	SCALE	NTS
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					DRAWN	HR 07.21
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					APPROVED	PF 07.21

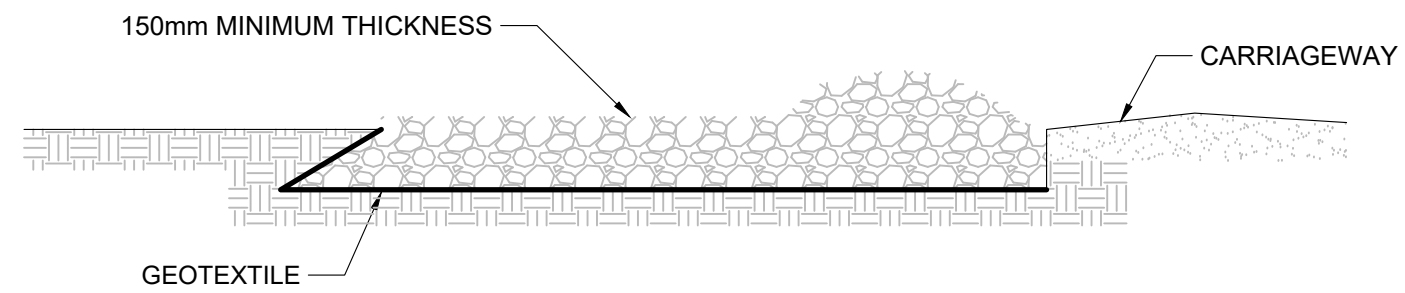
CLIENT
BUILD RICH LIMITED
Conditions of Use: These drawings shall only be used for the purpose for which they were supplied. Do not measure off this drawing. If doubt please contact Engineer.

SITE ADDRESS
2182 EAST COAST ROAD SILVERDALE (STAGE 3 & 4)
DRAWING TITLE
EROSION AND SEDIMENT CONTROL PLAN

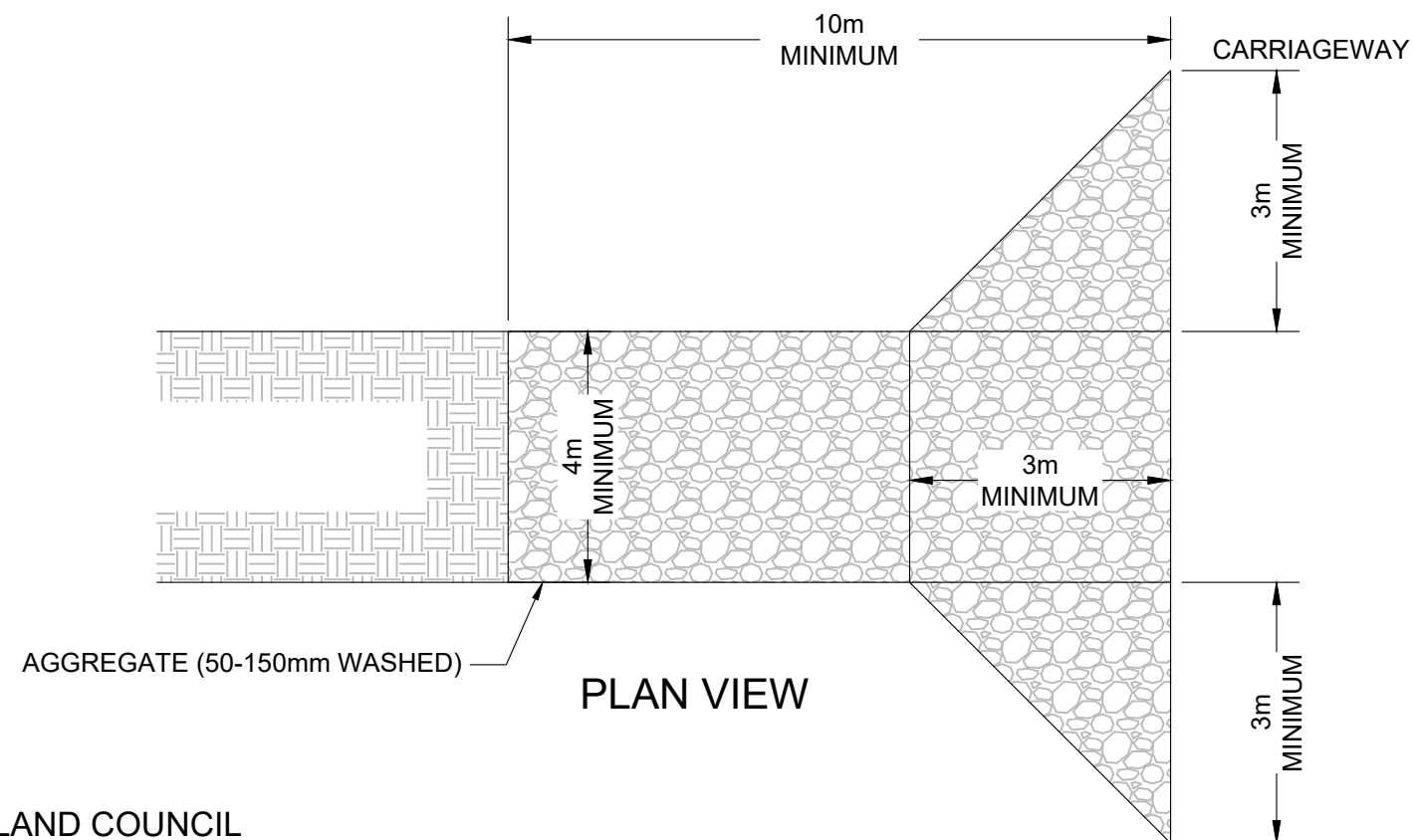
DRAWING NUMBER
1625 - RC - EW207
DATE
JULY 2021
REVISION
-

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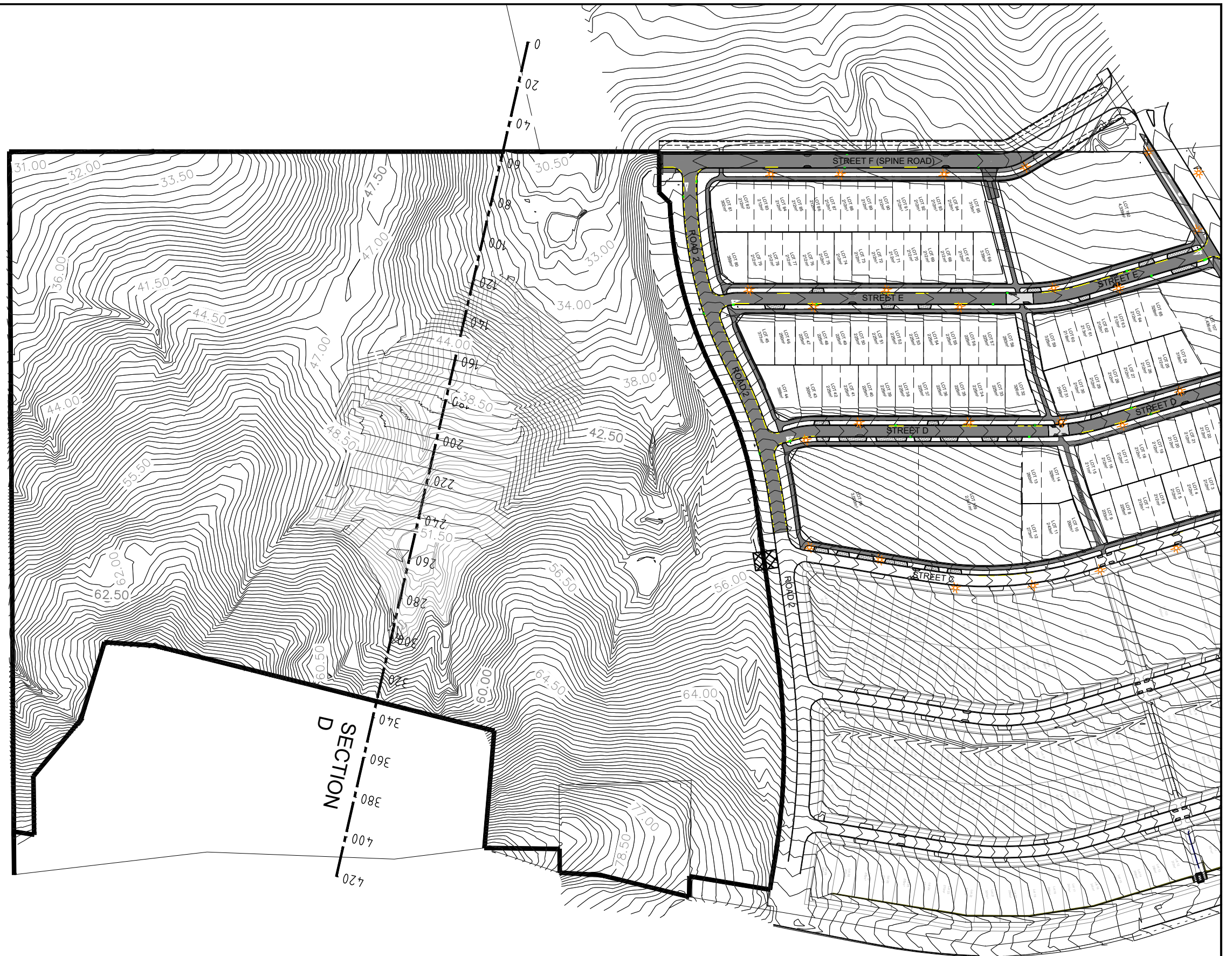
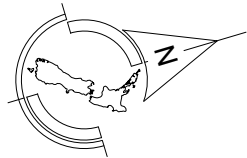
SIDE ELEVATION



PLAN VIEW

NOT FOR CONSTRUCTION
FOR RESOURCE CONSENT PURPOSE

REFER TO AUCKLAND COUNCIL
GD-05 FOR FURTHER DETAILS



NOTE:
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HORIZONTAL DATUM: GEODETIC DATUM 2000
VERTICAL DATUM: AUCKLAND MEAN SEA LEVEL 1946

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REV.	DESCRIPTION	CHECK	APP'D	DATE	SCALE 1:2000 AT A3			CLIENT	SITE ADDRESS	DRAWING NUMBER		DATE	REVISION	ASPIRE CONSULTING ENGINEERS
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					DRAWN	OC	07.2021							
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					DESIGN CHECK	PF	07.2021							
					APPROVED	PF	07.2021							
								Conditions of Use: These drawings shall only be used for the purpose for which they were supplied. Do not measure off this drawing. If doubt please contact Engineer.	DRAWING TITLE PROPOSED EARTHWORKS SECTIONS PLAN					

