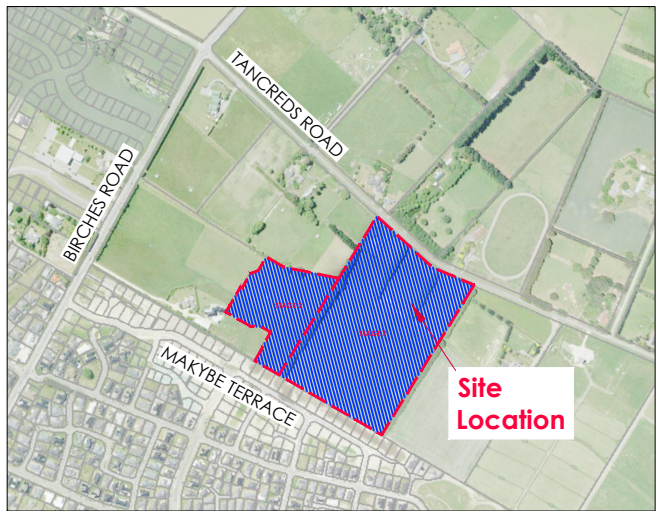
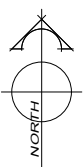
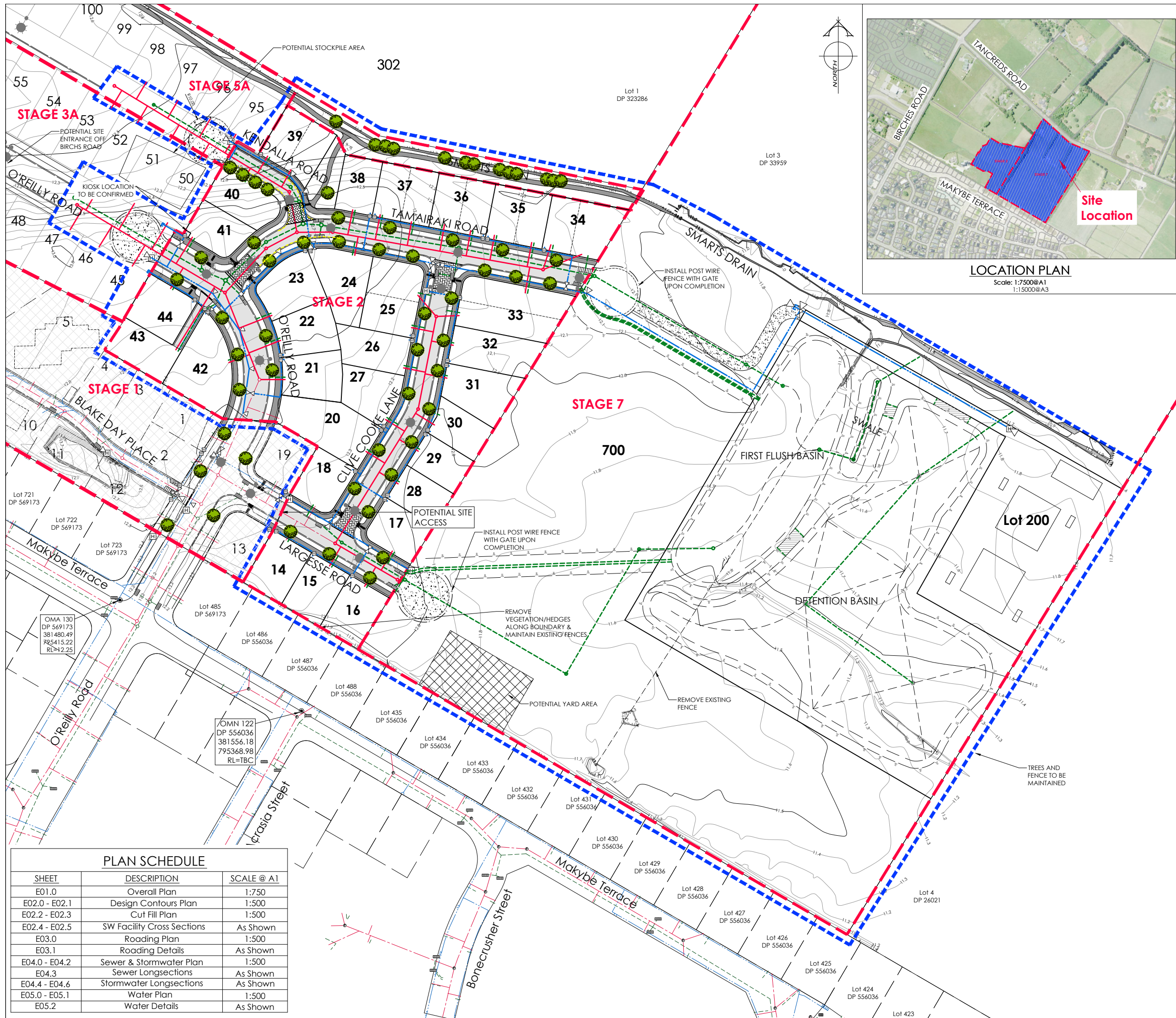




LOCATION PLAN
Scale: 1:7500@A1
1:15000@A3

AMENDMENTS:		
AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	NO CHANGE THIS SHEET
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

- NOTES:
- ALL WORKS IN ACCORDANCE WITH SDC CODE OF PRACTICE PARTS 1-11 STANDARDS, IF STANDARDS ARE UNSPECIFIED REFER TO CCC CSS PARTS 1-7.
 - ALL PLANS ARE TO BE READ AND DISTRIBUTED AS A COMPLETE SET. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
 - ELECTRICITY & TELECOM SERVICES NOT SHOWN. REFER TO ELECTRICAL & COMMUNICATION PLANS FOR DUCT LOCATIONS.
 - TRENCHING AND INSTALLATION OF POWER AND TELECOM SERVICES TO BE PROVIDED IN ACCORDANCE WITH SERVICE PROVIDERS PLANS AND SPECIFICATIONS.
 - EXISTING SERVICES HAVE BEEN DIGITISED FROM SERVICE AUTHORITY PLANS; COMPLETENESS AND ACCURACY ARE NOT GUARANTEED. ALL SERVICES TO BE FULLY SEARCHED AND PILOTED PRIOR TO TRENCHING.
 - NATURAL CONTOUR INTERVAL: 0.1m MINOR. 0.5m MAJOR.
 - ORIGIN OF LEVELS
MA67 DP518987 (F5J0)
RL=11.39
 - LEVELS IN TERMS OF NZVD 2016
 - CONTROL OF SW, SEDIMENT AND DUST ON SITE IS THE RESPONSIBILITY OF THE CONTRACTOR.
 - ALL ROW AND DRIVEWAYS ARE TO HAVE 50mm DUCTS INSTALLED FOR COMMUNICATIONS AND POWER SUPPLY.
 - YARD AREA TO BE CONFIRMED.
 - CONTAMINATED AREAS TO BE REMEDIATED PRIOR TO EARTHWORKS.

LEGEND:

	STAGE BOUNDARY		EXTENT OF WORKS
	FLUSHING POINT		BOUNDARY BOX
	STREET LIGHT		EXISTING STREET LIGHT
	PROPOSED TREE		
	NEW ASPHALT PAVEMENT		NEW FOOTPATH
	NEW CHIP SEAL PAVEMENT		
	NEW EXPOSED AGGREGATE CONCRETE		

EXISTING SERVICES

SANITARY SEWER	STD. MH	SANITARY SEWER	STD. MH
SANITARY SEWER	VENTED MH	SANITARY SEWER	VENTED MH
STORMWATER	MH	STORMWATER	MH
WATER	FH	WATER	FH
KERB	VALVE	KERB	VALVE
	CUT DOWN		CUT DOWN

PROPOSED SERVICES

SANITARY SEWER	STD. MH	SANITARY SEWER	STD. MH
SANITARY SEWER	VENTED MH	SANITARY SEWER	VENTED MH
STORMWATER	MH	STORMWATER	MH
WATER	FH	WATER	FH
KERB	VALVE	KERB	VALVE
	CUT DOWN		CUT DOWN

NAME	SIGNED	DATE
DESIGNED BY SAM JONES		
CHECKED BY TODD INNESS		

DAVIE LOVELL-SMITH
PLANNING SURVEYING ENGINEERING

116 Wrights Road P O Box 679 Christchurch 8140. New Zealand
Telephone: 03 379-0793 Website: www.dls.co.nz E-mail: office@dls.co.nz

JOB TITLE:
**Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7**

SHEET TITLE:
Overall Plan

DRAWING STATUS:
For Engineering Approval

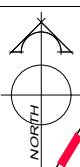
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DRAWING No: SHEET No: DRAWN: JS

E.21417 **E01.0** **R8**

PLAN SCHEDULE		
SHEET	DESCRIPTION	SCALE @ A1
E01.0	Overall Plan	1:750
E02.0 - E02.1	Design Contours Plan	1:500
E02.2 - E02.3	Cut Fill Plan	1:500
E02.4 - E02.5	SW Facility Cross Sections	As Shown
E03.0	Roading Plan	1:500
E03.1	Roading Details	As Shown
E04.0 - E04.2	Sewer & Stormwater Plan	1:500
E04.3	Sewer Longsections	As Shown
E04.4 - E04.6	Stormwater Longsections	As Shown
E05.0 - E05.1	Water Plan	1:500
E05.2	Water Details	As Shown



AMENDMENTS :		
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R6	7/04/26	NO CHANGE THIS SHEET
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MA67 DP518987 (F5J0)
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 - CUT FILL CONTOUR INTERVAL: MAJOR 1.0m MINOR 0.1 m.
 - ALL EARTHFILL WORKS TO COMPLY WITH NZS 4431:2022 RELEVANT CERTIFICATION REQUIRED AS PROOF.
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 - ESCMP TO BE IN PLACE PRIOR TO ANY EARTHWORKS.
 - CONTRACTOR MUST READ ALL DISCHARGE CONSENTS PRIOR TO ANY EARTHWORKS.
 - DRAWINGS TO BE DISTRIBUTED AND READ AS A COMPLETE SET. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.

LEGEND :		
LEVELS		
	20.31	PROPOSED LOT LEVELS
	25.35	EXISTING LOT LEVELS
	SEC. FLOW	DIRECTION OF FLOW
EXISTING SERVICES		
PROPOSED SERVICES		
KERB		
NAME		
SIGNED		
DATE		
DESIGNED BY SAM JONES		
CHECKED BY TODD INNESS		



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JOB TITLE:
**Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7**

SHEET TITLE:
Design Contours

DRAWING STATUS
For Engineering Approval

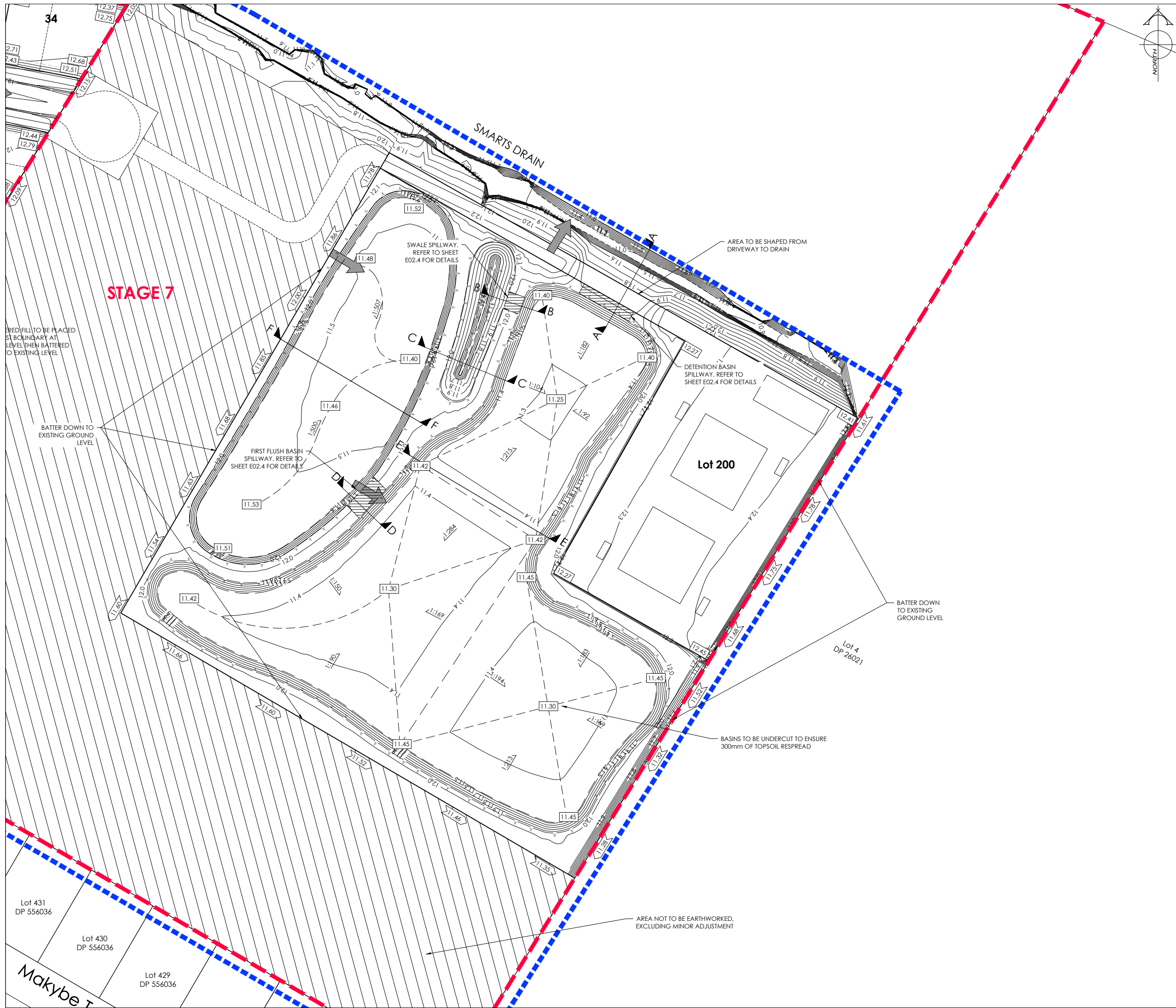
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DATE: May 2026

CAD FILE : \\21270\Eng\Drawings\Stages 2 & 7\E21417_E020_R8.dwg

DRAWING No : SHEET No: REVISION :

E.21417 E02.0 R8



AMENDMENTS :		
AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	NO CHANGE THIS SHEET
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

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MA67 DP518987 (F5J0)
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LEGEND :

LEVELS

20.31 PROPOSED LOT LEVELS

25.35 EXISTING LOT LEVELS

SEC. FLOW DIRECTION OF FLOW

EXISTING SERVICES PROPOSED SERVICES

KERB KERB

NAME	SIGNED	DATE
DESIGNED BY SAM JONES		
CHECKED BY TODD INNESS		



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JOB TITLE:

**Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7**

SHEET TITLE:

Design Contours

DRAWING STATUS

For Engineering Approval

SCALE: 1:500@A1
1:1000@A3 DATE: May 2026

CAD FILE :\\21270\\Eng\\Drawings\\Stages 2 & 7\\E21417_E02.0_R8.dwg

DRAWING No : SHEET No: DRAWN : JS

E.21417 E02.1 R8

REVISION :



AMENDMENTS :

AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	NO CHANGE THIS SHEET
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R8	22/05/26	NO CHANGE THIS SHEET

NOTES :

1.

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2.

ORIGIN OF LEVELS
MA67 DP518987 (F5J0)
RL=11.39

LEVELS IN TERMS OF NZVD 2016

3.

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LEGEND :

LEVELS

20.31

PROPOSED LOT LEVELS

25.35

EXISTING LOT LEVELS

SEC. FLOW

DIRECTION OF FLOW

ENGINEERING FILL

CUT

EXISTING SERVICES

PROPOSED SERVICES

KERB

KERB

NAME

SIGNED

DATE

DESIGNED BY

SAM JONES

CHECKED BY

TODD INNESS

DAVE LOVELL-SMITH

PLANNING SURVEYING ENGINEERING

116 Wrights Road

P O Box 679

Christchurch 8140, New Zealand

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Website: www.dls.co.nz

E-mail: office@dls.co.nz

JOB TITLE:

Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7

SHEET TITLE:

Cut Fill Plan

DRAWING STATUS

For Engineering Approval

SCALE: 1:500@A1
1:1000@A3

DATE: May 2026

CAD FILE : F:\21270\Eng\Drawings\Stages 2 & 7\E21417_E02.0_R8.dwg

DRAWING No: E.21417

SHEET No: E02.2

REVISION : R8

NEW SURFACE

EX. SURFACE

NEW POSTS 125mm x 100mm INSTALLED MID SPAN OF EXISTING FENCE AND CONCRETED 600mm DEEP, SAWN OFF AT NEW FINISHED GROUND LEVEL

INSTALL 200x50mm H4 RETAINING BOARDS

BOUNDARY

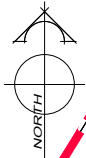
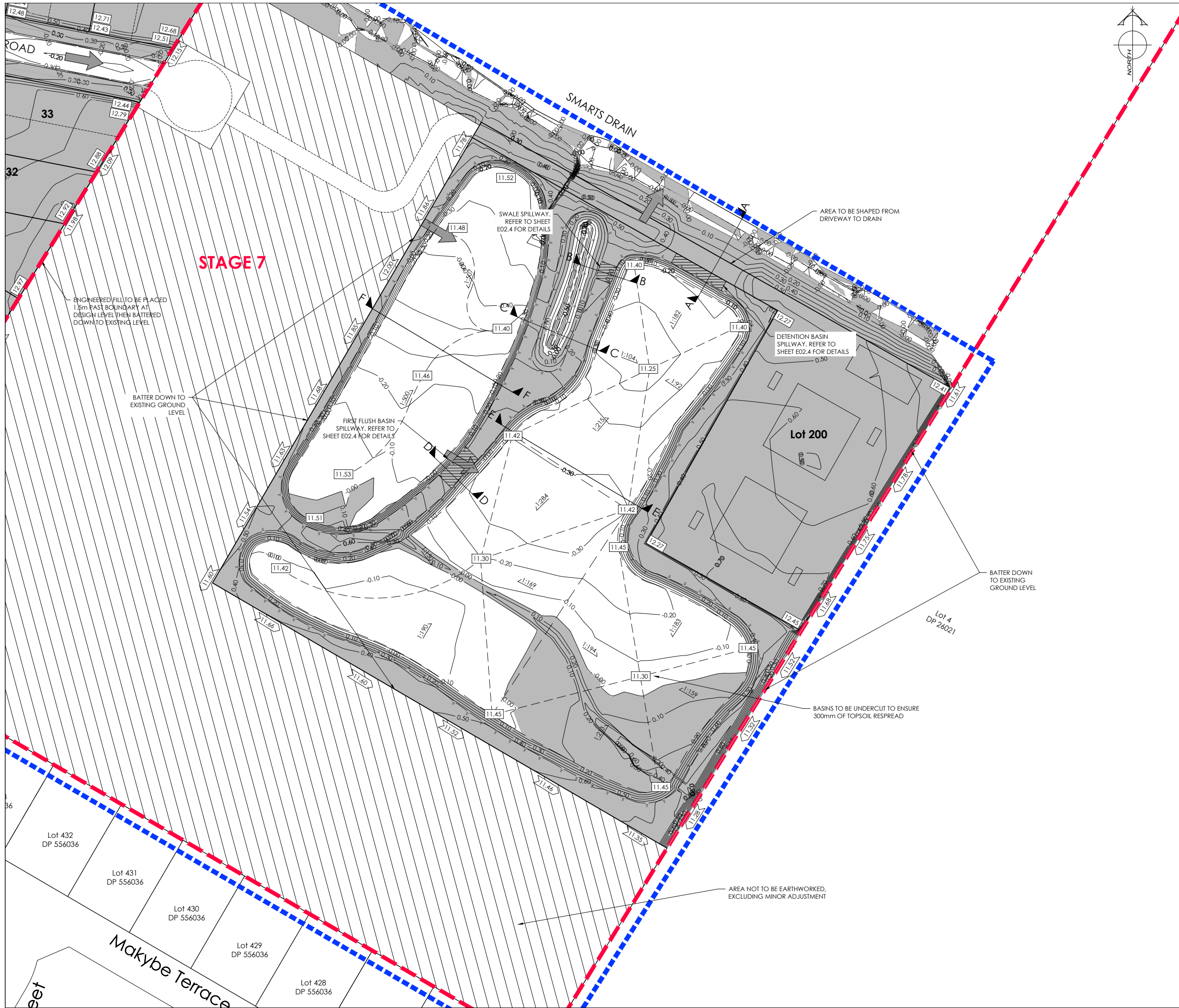
EX. FENCE

0.1-0.4m

0.20

TYPICAL RETAINING FENCE CROSS SECTION- 0.2m HIGH

SCALES: 1:25@A1
1:50@A3



AMENDMENTS :		
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R6	7/04/26	NO CHANGE THIS SHEET
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

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LEGEND :

LEVELS

20.31 PROPOSED LOT LEVELS

25.35 EXISTING LOT LEVELS

SEC. FLOW DIRECTION OF FLOW

ENGINEERING FILL

CUT

EXISTING SERVICES		PROPOSED SERVICES	
KERB		KERB	
DESIGNED BY	SAM JONES	SIGNED	
CHECKED BY	TODD INNESS	DATE	


DAVIE LOVELL-SMITH
PLANNING SURVEYING ENGINEERING

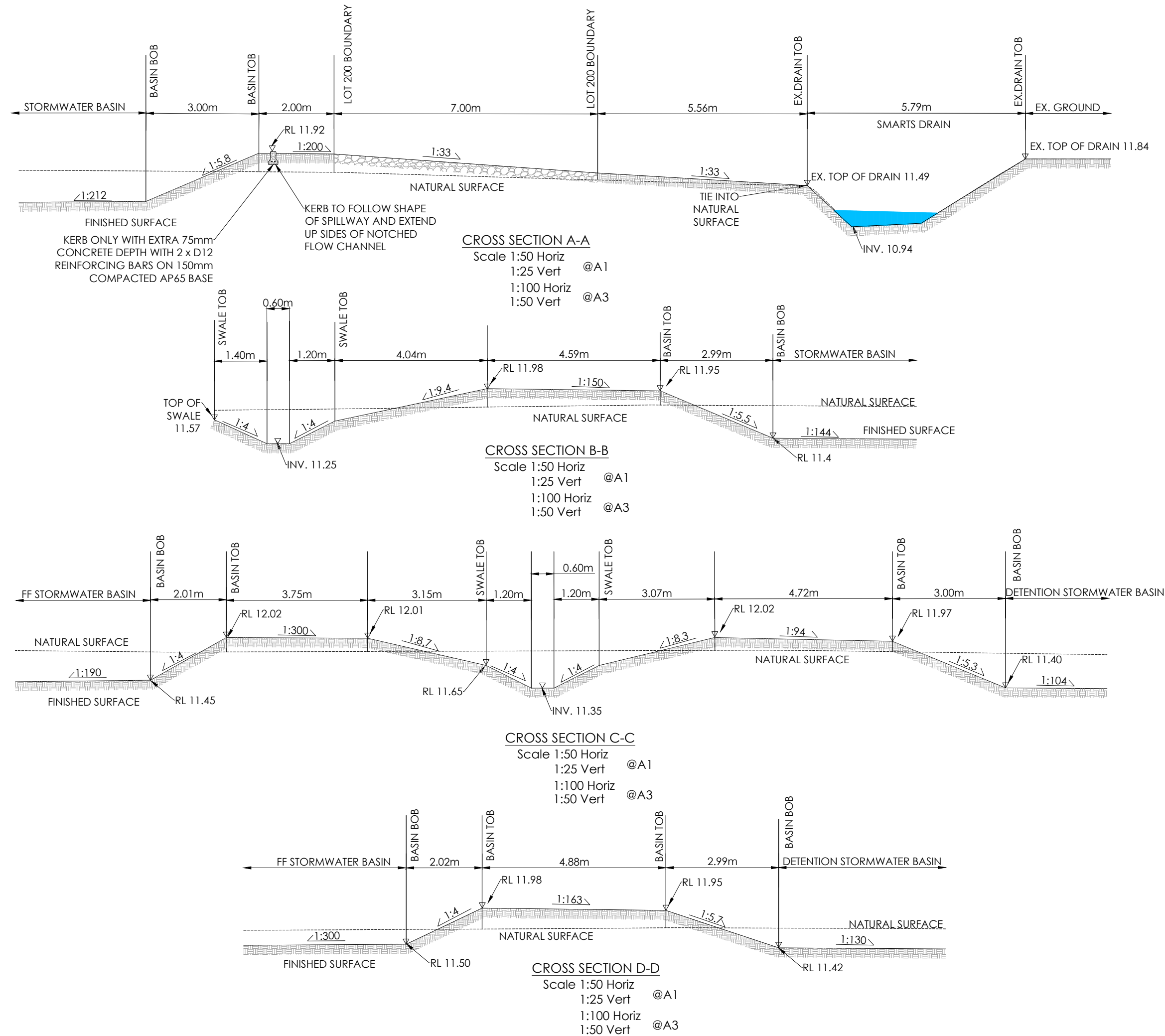
116 Wrights Road P O Box 679 Christchurch 8140. New Zealand
Telephone: 03 379-0793 Website: www.dls.co.nz E-mail: office@dls.co.nz

JOB TITLE:
**Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7**

SHEET TITLE:
Cut Fill Plan

DRAWING STATUS
For Engineering Approval

SCALE: 1:500@A1 1:1000@A3	DATE: May 2026	DRAWN: JS
CAD FILE: F:\21270\Eng\Drawings\Stages 2 & 7\E21417_E02.0_R8.dwg	DRAWING No: E.21417	SHEET No: E02.3
		REVISION: R8



AMENDMENTS :

AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	NO CHANGE THIS SHEET
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

NOTES :

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MA67 DP518987 (F5J0)
RL=11.39

LEVELS IN TERMS OF NZVD 2016

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LEGEND :

LEVELS

20.31

PROPOSED LOT LEVELS

25.35

EXISTING LOT LEVELS

SEC. FLOW

DIRECTION OF FLOW

ENGINEERING FILL

CUT

EXISTING SERVICES

PROPOSED SERVICES

KERB

KERB

	NAME	SIGNED	DATE
DESIGNED BY	SAM JONES		
CHECKED BY	TODD INNESS		

DAVIE LOVELL-SMITH

PLANNING SURVEYING ENGINEERING

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JOB TITLE:

Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7

SHEET TITLE:

SW Facility Cross Sections

DRAWING STATUS

For Engineering Approval

SCALE : As Shown

DATE : May 2026

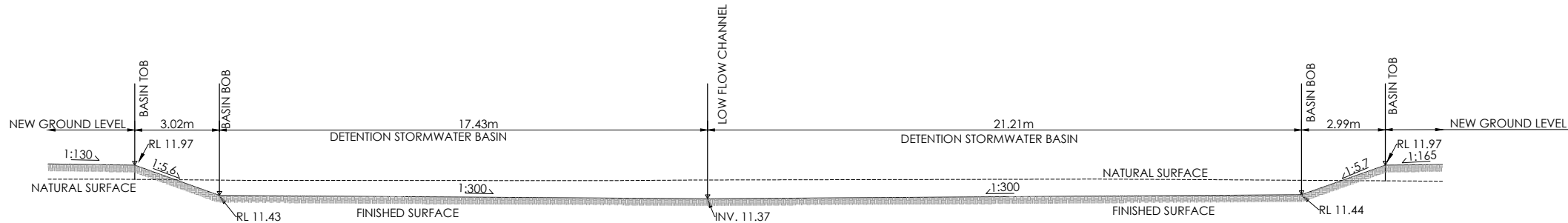
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DRAWN : JS

DRAWING No : **E.21417**

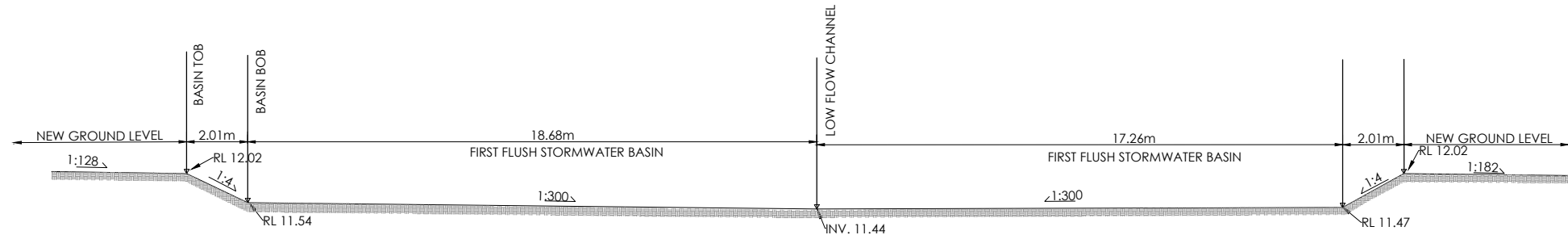
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REVISION : **R8**



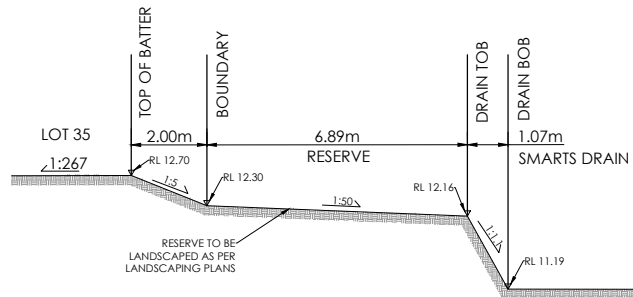
CROSS SECTION E-E

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1:50 Vert @A1
1:200 Horiz @A3
1:100 Vert @A3



CROSS SECTION F-F

Scale 1:100 Horiz @A1
1:50 Vert @A1
1:200 Horiz @A3
1:100 Vert @A3



CROSS SECTION G-G

Scale 1:100 Horiz @A1
1:50 Vert @A1
1:200 Horiz @A3
1:100 Vert @A3

AMENDMENTS :		
AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	NO CHANGE THIS SHEET
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

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LEGEND :

- LEVELS
- 20.31 PROPOSED LOT LEVELS
 - 25.35 EXISTING LOT LEVELS
 - SEC. FLOW DIRECTION OF FLOW
 - ENGINEERING FILL
 - CUT

EXISTING SERVICES PROPOSED SERVICES

KERB	NAME	SIGNED	DATE
DESIGNED BY	SAM JONES		
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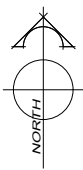
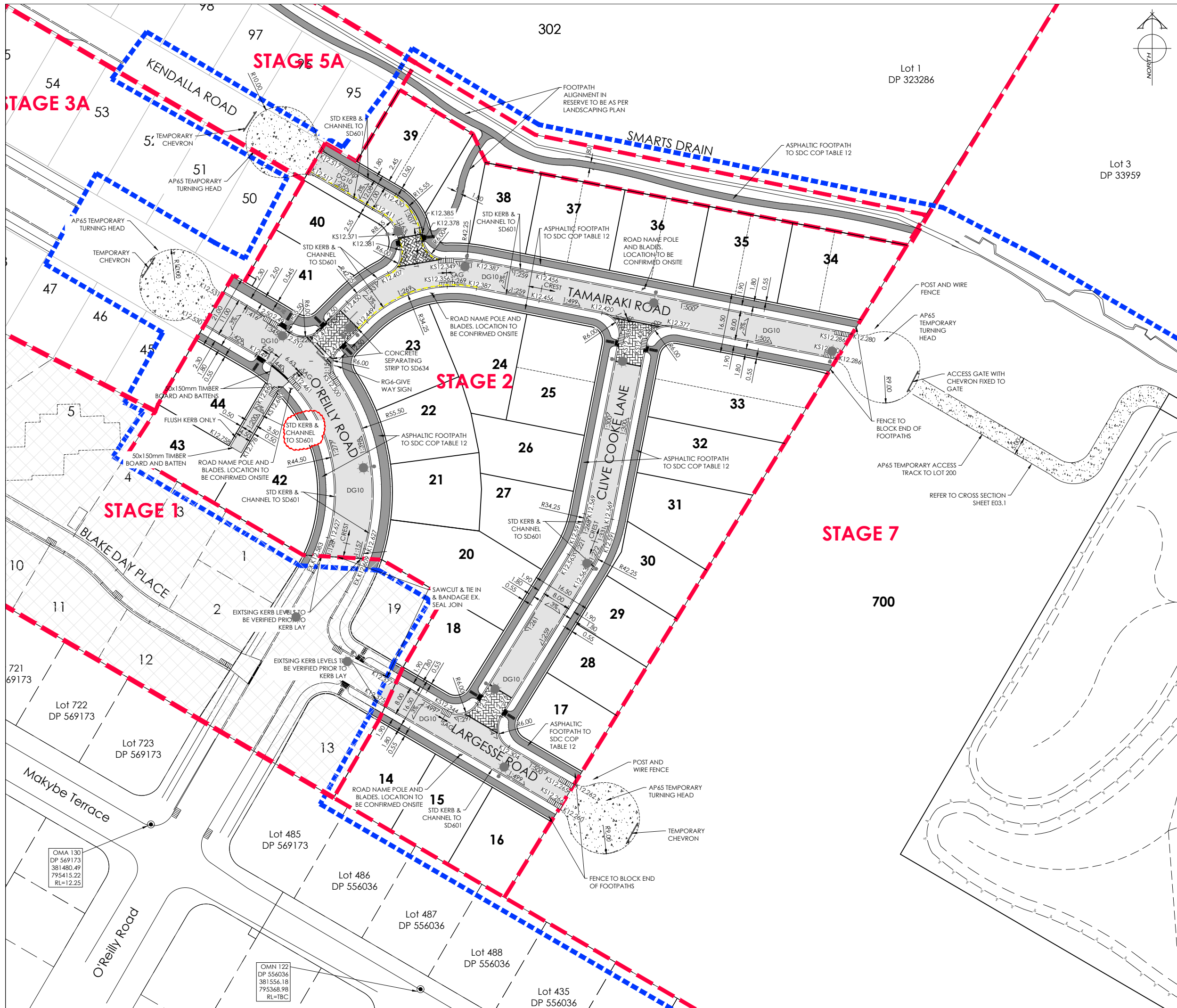
JOB TITLE:
**Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7**

SHEET TITLE:
SW Facility Cross Sections

DRAWING STATUS
For Engineering Approval

SCALE : As Shown DATE : May 2026

CAD FILE : \\21270\Eng\Drawings\Stages 2 & 7\E21417_E02.0_R8.dwg	DRAWN : JS
DRAWING No : E.21417	SHEET No: E02.5
	REVISION : R8



AMENDMENTS:		
AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	KERB LEVELS UPDATED
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

- NOTES:
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 - ALL PLANS ARE TO BE READ AND DISTRIBUTED AS A COMPLETE SET. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.
 - ORIGIN OF LEVELS
MA67 DP518987 (F5J0)
RL=11.39

LEVELS IN TERMS OF NZVD 2016
 - FOOTPATH BASECOURSE TESTING - MINIMUM CLEGG HAMMER VALUE OF 25 REQUIRED FOR FOOTPATHS & RESIDENTIAL CROSSINGS.
 - MINIMUM CLEGG HAMMER VALUE OF 35 REQUIRED FOR COMMERCIAL CROSSINGS.
 - KERB & CHANNEL BASECOURSE TESTING - MINIMUM DRY DENSITY OF 2100kg/m³ WITH 75% EQUAL OR EXCEEDING 2150kg/m³.
 - CUTDOWNS AT RESIDENTIAL PARKING AREAS TO HAVE 280mm OF CONCRETE AS PER SD611 AND CUT DOWN IN COMMERCIAL PARKING AREAS TO HAVE 280mm OF CONCRETE WITH REINFORCEMENT AS PER SD611.
 - ALL BERMS TO BE AND COVERED WITH A MINIMUM OF 150mm GRADE 1 TOPSOIL AND GRASSED WITH CCC BERM MIX.
 - ELECTRICITY & TELECOM SERVICES NOT SHOWN. REFER TO ELECTRICAL & COMMUNICATION PLANS FOR DUCT LOCATIONS.
 - ALL ROAD AND FOOTPATH AREAS TO BE SURFACED USING ASPHALTIC CONCRETE. FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH CCC REQUIREMENTS WITH 25mm DEPTH AC. WHILE ROAD PAVEMENTS TO BE 30mm DEPTH.
 - METAL DEPTHS TO BE CONFIRMED OR INCREASED PRIOR TO COMMENCEMENT OF WORK FOLLOWING THE CHECKING OF SUBGRADE CBR ON SITE.
 - KERBS AT INTERSECTIONS HAVE A RADIUS OF 6.0m UNLESS SHOWN OTHERWISE.
 - ALL PAVEMENT CROSSFALLS ARE TO BE CONSTRUCTED IN ACCORDANCE SD623.
 - TACTILE PAVERS ARE TO BE INSTALLED AS PER SD623 AND RTS14 GUIDELINES FOR FACILITIES FOR THE BLIND AND VISION-IMPAIRED PEDESTRIANS.
 - ROAD BASECOURSE TESTING - MAXIMUM BENKELMAN BEAM DEFLECTION OF 2.00mm WITH 95% BELOW 1.6mm FOR ROADS AND A MAXIMUM DEFLECTION OF 2.5mm WITH 95% BELOW 2.00mm FOR RIGHT OF WAYS.
 - ALL ROW AND DRIVEWAYS ARE TO HAVE 50mm DUCTS INSTALLED FOR COMMUNICATIONS AND POWER SUPPLY.
 - FOOTPATH AND VEHICLE CROSSING FINISHED BASECOURSE SURFACES SHALL BE TREATED WITH PROPRIETARY WEED KILLER AS PER MANUFACTURER SPECIFICATION PRIOR TO SEALING.

LEGEND:	
	STREET LIGHT
	EXISTING STREET LIGHT
	NEW ASPHALT PAVEMENT
	NEW CHIP SEAL PAVEMENT
	NEW AP65
	NEW FOOTPATH
	COBBLES

LEVELS	
K20.31	PROPOSED KERB LEVEL
B20.31	PROPOSED BOARD & BATTEN LEVEL
N20.31	PROPOSED NIB KERB LEVEL

EXISTING SERVICES		PROPOSED SERVICES	
KERB		KERB	CUT DOWN

NAME	SIGNED	DATE
DESIGNED BY: SAM JONES		
CHECKED BY: TODD INNESS		

DAVIE LOVELL-SMITH
PLANNING SURVEYING ENGINEERING

116 Wrights Road P O Box 679 Christchurch 8140. New Zealand
Telephone: 03 379-0793 Website: www.dls.co.nz E-mail: office@dls.co.nz

JOB TITLE:
**Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7**

SHEET TITLE:
Roading Layout

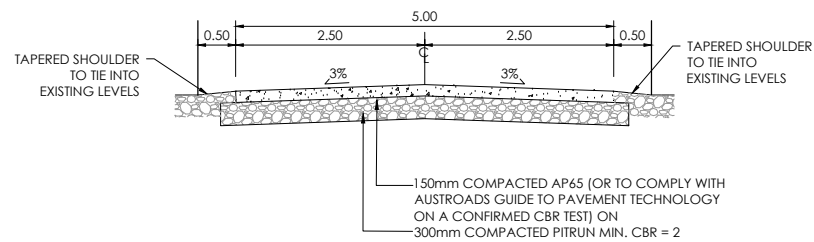
DRAWING STATUS
For Engineering Approval

SCALE: 1:500@A1
1:1000@A3
DATE: May 2026

CAD FILE: \\21270\Eng\Drawings\Stages 2 & 7\E21417_E01.0_R8.dwg

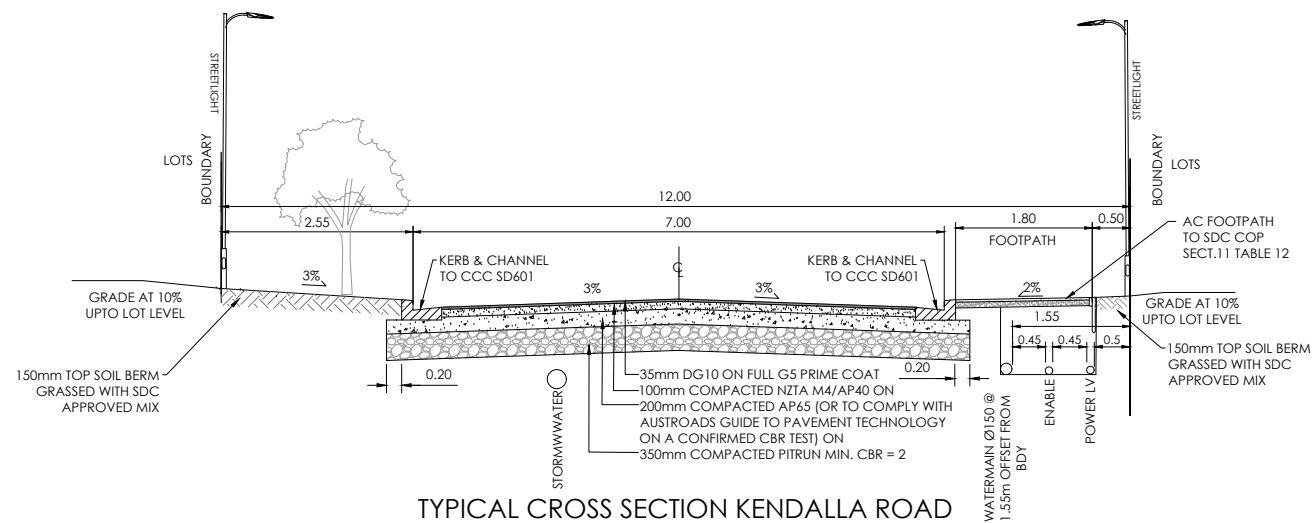
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E.21417 E03.0 R8



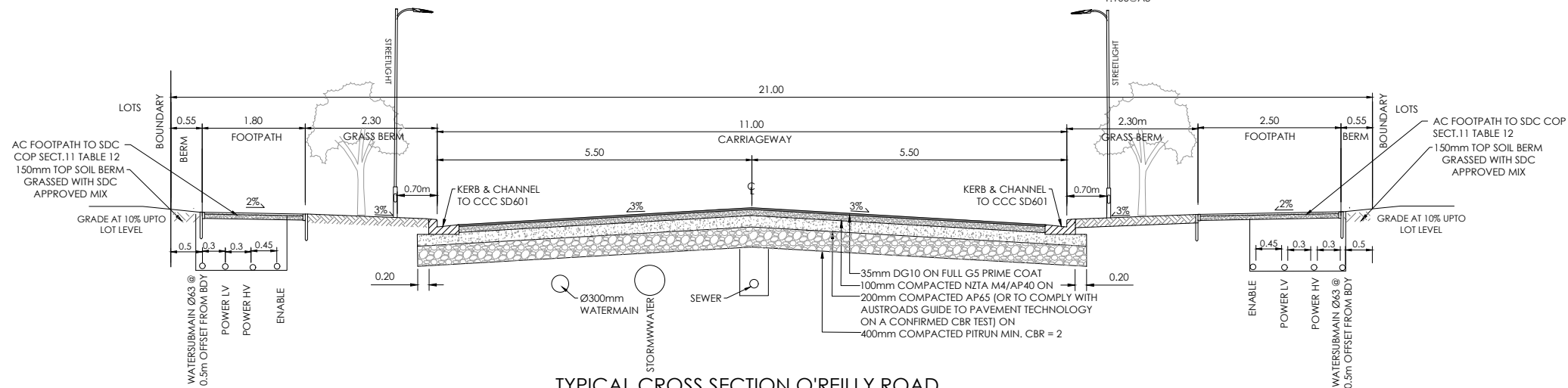
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SCALE 1:50@A1
1:100@A3



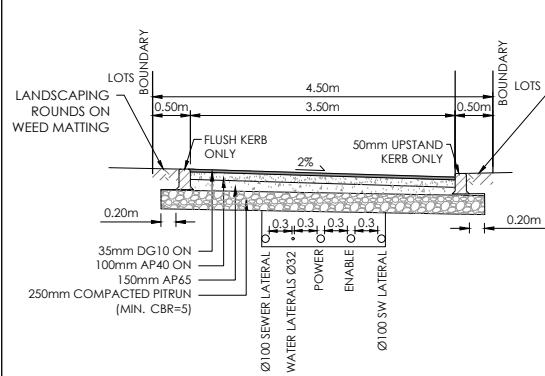
TYPICAL CROSS SECTION KENDALLA ROAD

SCALE 1:50@A1
1:100@A3



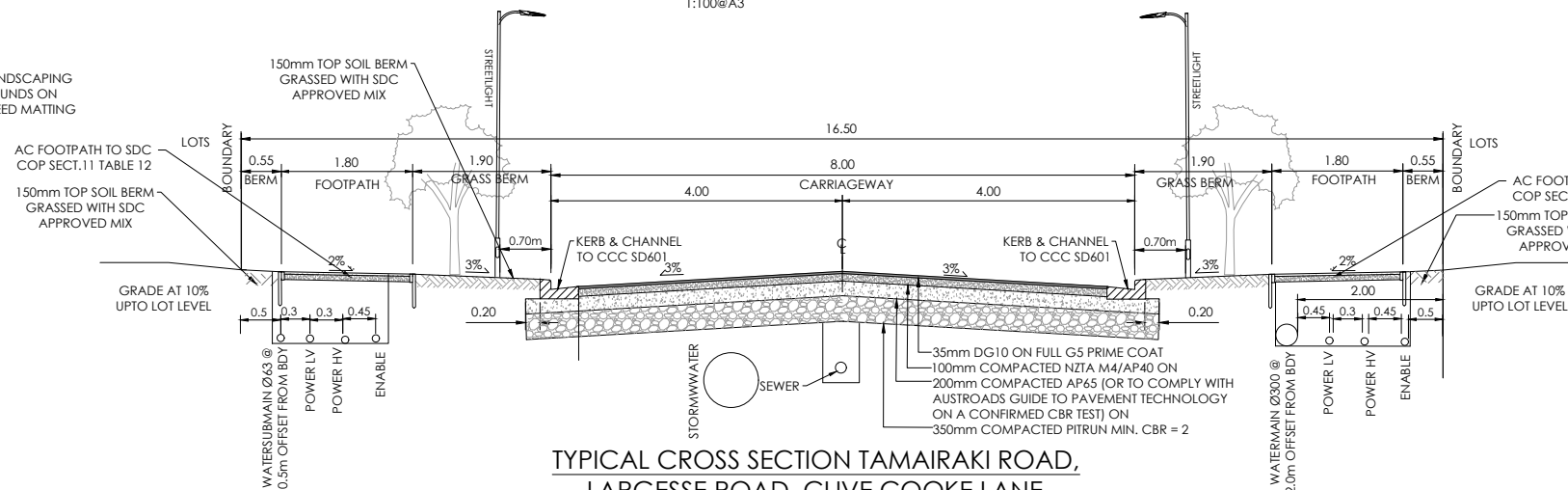
TYPICAL CROSS SECTION O'REILLY ROAD

SCALE 1:50@A1
1:100@A3



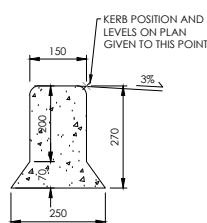
TYPICAL CROSS SECTION ACCESS LOT 43

SCALE 1:50@A1
1:100@A3



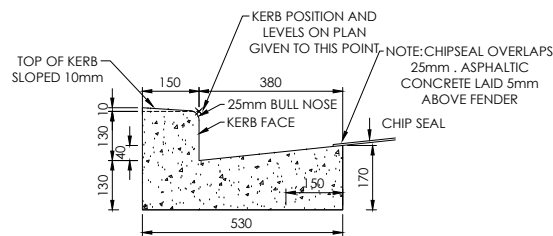
TYPICAL CROSS SECTION TAMAIRAKI ROAD,
LARGESSE ROAD, CLIVE COOKE LANE

SCALE 1:50@A1
1:100@A3



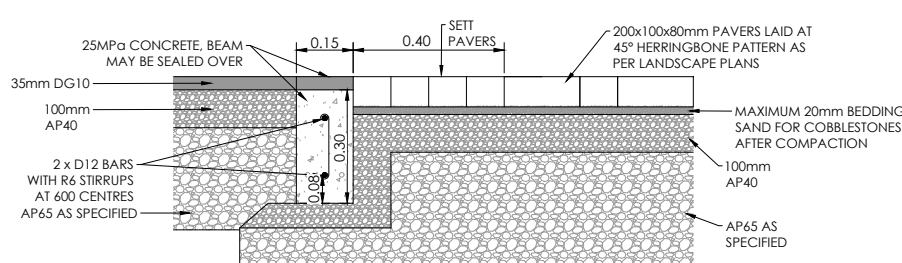
KERB ONLY TO CCC SD602

SCALE 1:10@A1
1:20@A3



KERB & FLAT CHANNEL TO SD601

SCALE 1:10@A1
1:20@A3



ROAD THRESHOLD OF CONCRETE BEAM TO BE LAID BESIDE
COBBLED ROAD CROSSINGS

SCALE 1:10@A1
1:20@A3

AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	NO CHANGE THIS SHEET
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

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MA67 DP518987 (F5J0)
RL=11.39
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NAME	SIGNED	DATE
DESIGNED BY: SAM JONES		
CHECKED BY: TODD INNESS		

DAVIE LOVELL-SMITH
PLANNING SURVEYING ENGINEERING

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Telephone: 03 379-0793 Website: www.dls.co.nz E-mail: office@dls.co.nz

JOB TITLE:
**Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7**

SHEET TITLE:
Roading Sections

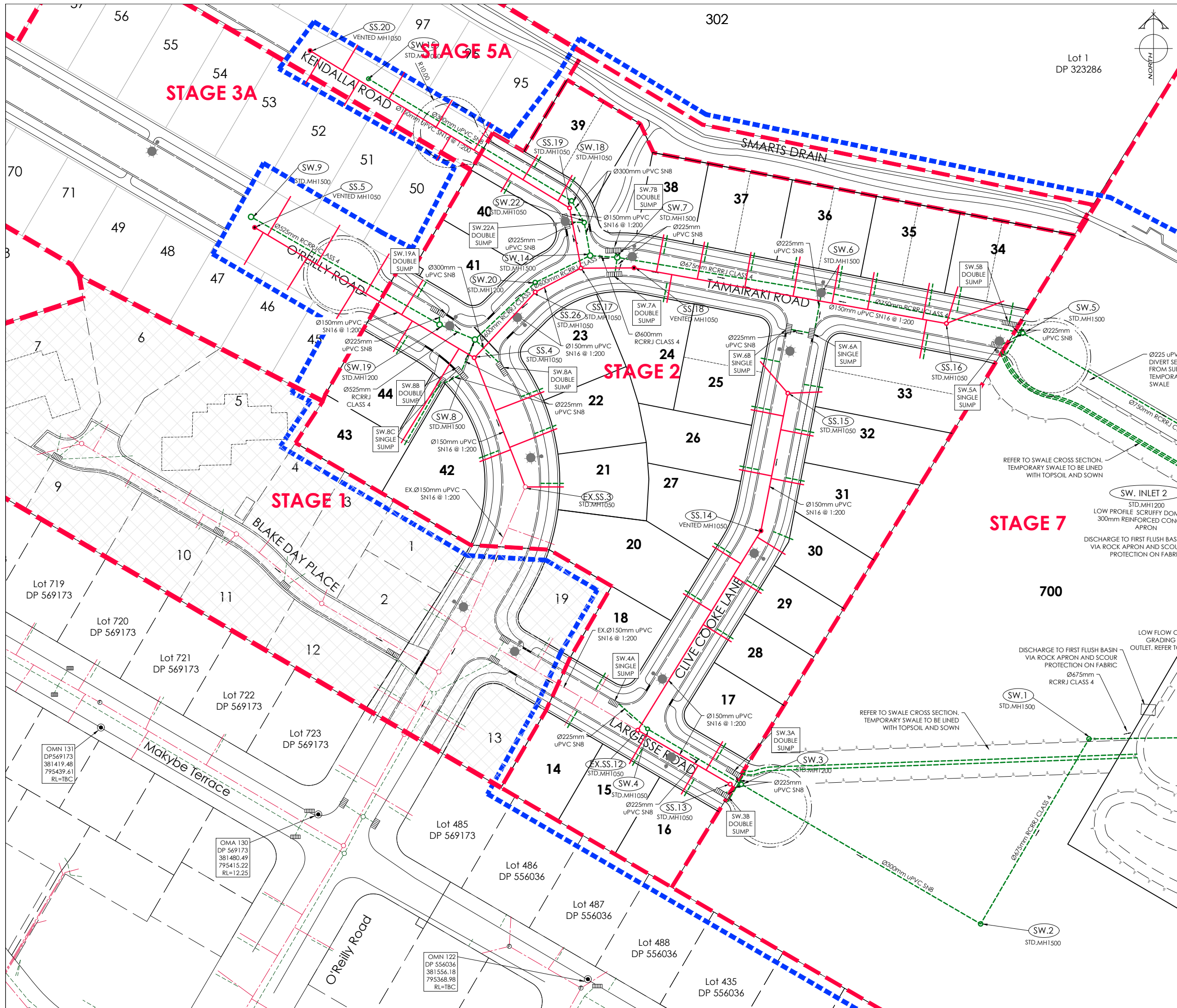
DRAWING STATUS:
For Engineering Approval

SCALE: As Shown DATE: May 2026

CAD FILE: J:\21270\Eng\Drawings\Stages 2 & 7\E21417_E01.0_R8.dwg

DRAWING No: E.21417 SHEET No: E03.1

REVISION: R8



AMENDMENTS:

AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	SEWER LAYOUT UPDATED
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

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- REFER TO LONGSECTIONS FOR ALL SEWER & STORMWATER LEVELS.
- ORIGIN OF LEVELS
MA67 DP518987 (F5JO)
RL=11.39

LEVELS IN TERMS OF NZVD 2016

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- BEDDING TO BE AS PER SD344 UNLESS OTHERWISE SPECIFIED.
- ALL SUMPS TO HAVE 450mm WETWELL.
- ALL LATERAL ENDS TO BE MARKED WITH A RED STAKE.
- MANHOLE CONNECTIONS SHALL BE STARTERS AND SHORTS AND SHORTS AND FINISHERS.
- LADDERS ARE REQUIRED FOR MANHOLES DEEPER THAN 1.3m WHEN MEASURING FROM THE TOP OF THE BENCHING TO THE FINISHED LEVEL.

LEGEND:

STREET LIGHT

EXISTING STREET LIGHT

EXISTING SERVICES

PROPOSED SERVICES

SANITARY SEWER

STD. MH

SANITARY SEWER

VENTED MH

STORMWATER

MH

KERB

SANITARY SEWER

STD. MH

SANITARY SEWER

VENTED MH

STORMWATER

MH

KERB

CUT DOWN

DESIGNED BY

SAM JONES

CHECKED BY

TODD INNESS

SIGNED

DATE

DAVE LOVELL-SMITH

PLANNING SURVEYING ENGINEERING

116 Wrights Road P O Box 679 Christchurch 8140 New Zealand
Telephone: 03 379-0793 Website: www.dls.co.nz E-mail: office@dls.co.nz

JOB TITLE:

Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7

SHEET TITLE:

Sewer & Stormwater Plan

DRAWING STATUS

For Engineering Approval

SCALE:

1:500@A1
1:1000@A3

DATE:

May 2026

CAD FILE:

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DRAWN:

JS

DRAWING No:

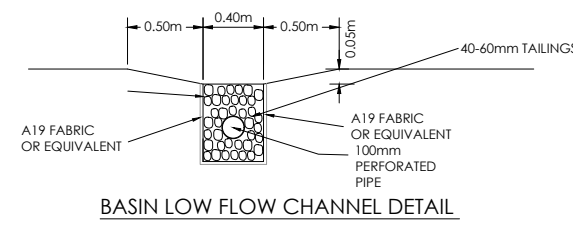
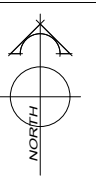
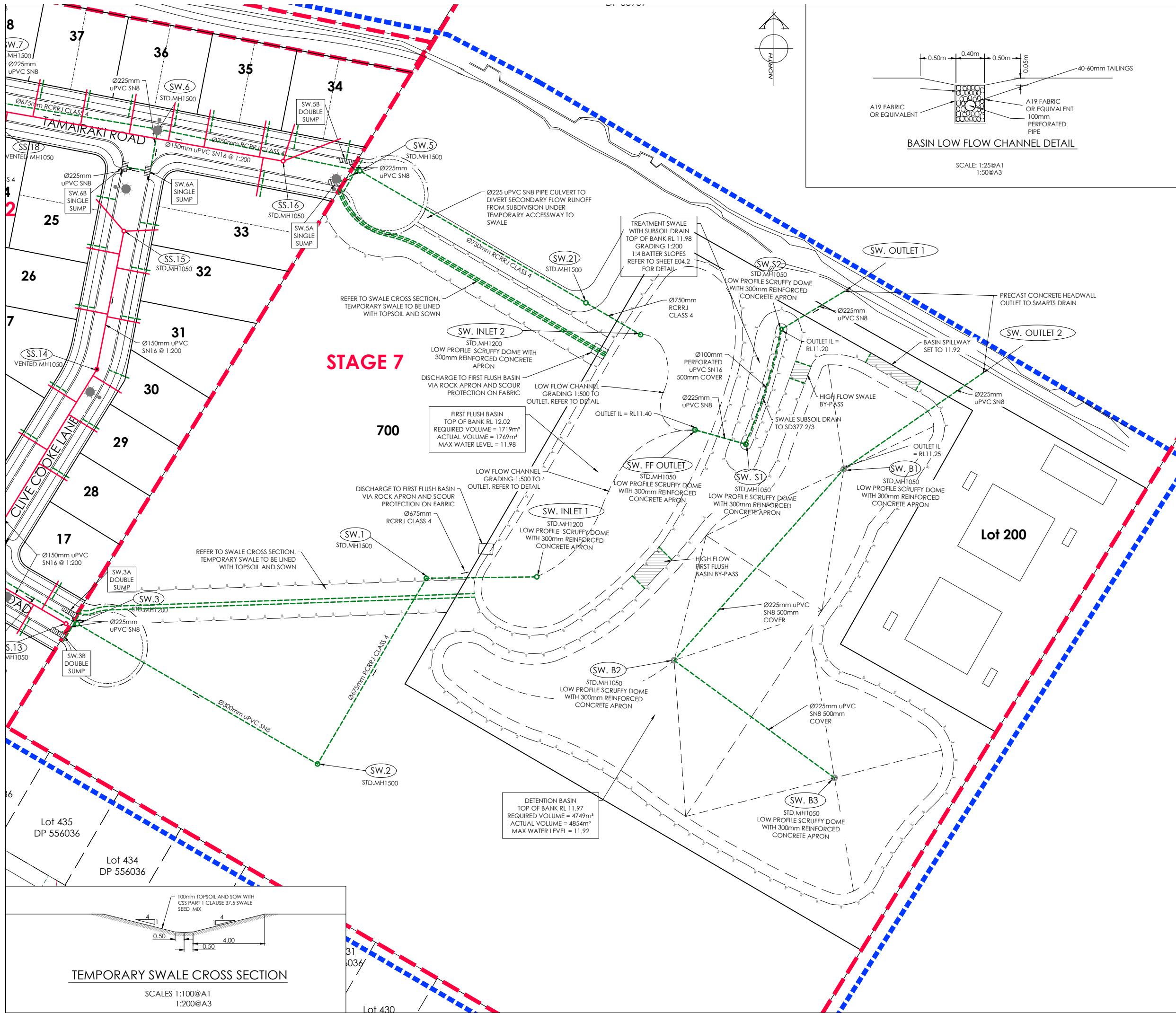
E.21417

SHEET No:

E04.0

REVISION:

R8



BASIN LOW FLOW CHANNEL DETAIL

SCALE: 1:25@A1
1:50@A3

AMENDMENTS:		
AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	SEWER LAYOUT UPDATED
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	SW LABELS ADDED

- NOTES:
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MA67 DP518987 (F5J0)
RL=11.39
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LEGEND:	
	STREET LIGHT
	EXISTING STREET LIGHT

EXISTING SERVICES		PROPOSED SERVICES	
SANITARY SEWER	STD. MH	SANITARY SEWER	STD. MH
SANITARY SEWER	VENTED MH	SANITARY SEWER	VENTED MH
STORMWATER	MH	STORMWATER	MH
KERB	CUT DOWN	KERB	CUT DOWN

NAME	SIGNED	DATE
DESIGNED BY: SAM JONES		
CHECKED BY: TODD INNESS		

DAVIE LOVELL-SMITH
PLANNING SURVEYING ENGINEERING

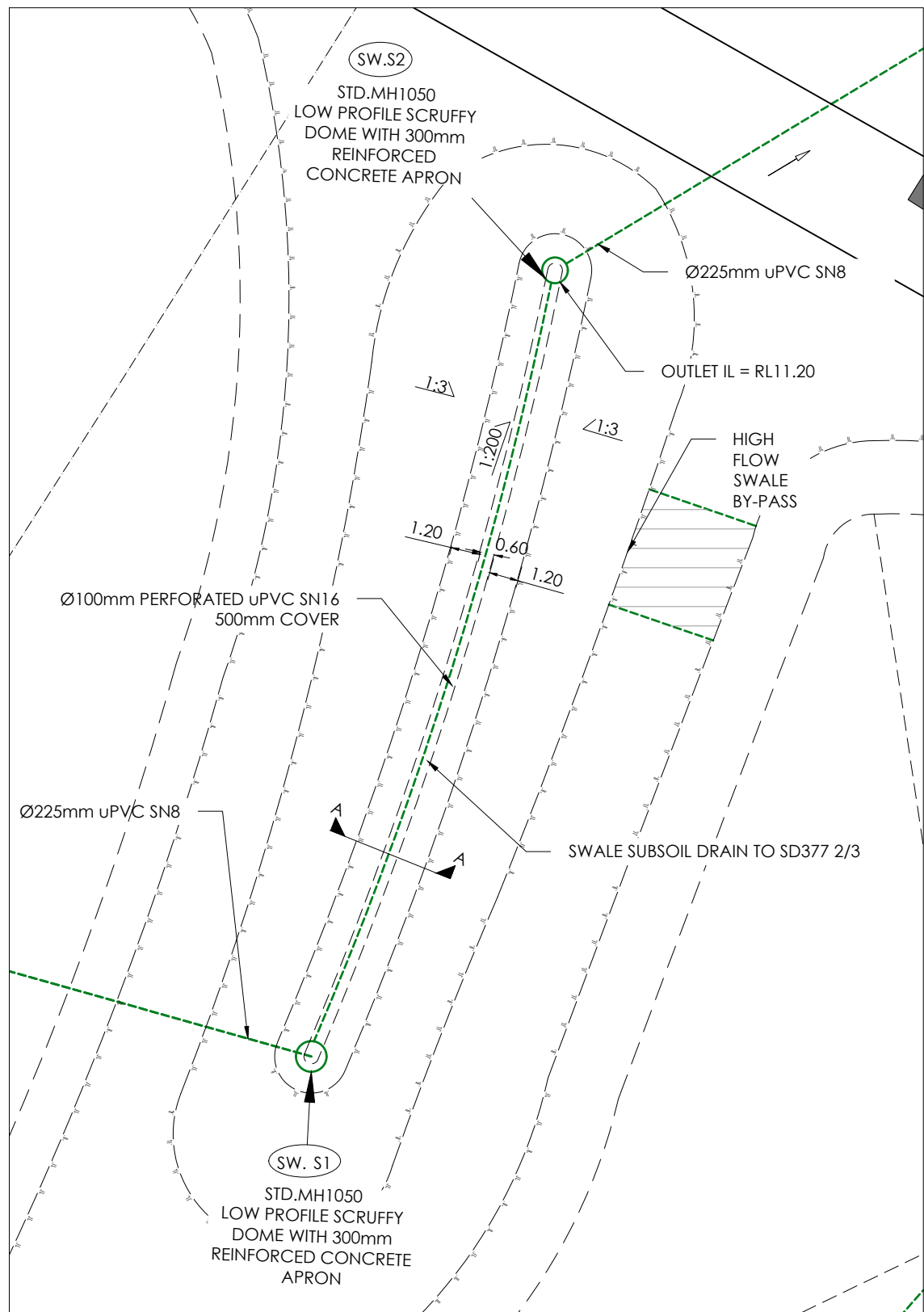
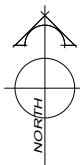
116 Wrights Road P O Box 679 Christchurch 8140, New Zealand
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JOB TITLE:
**Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7**

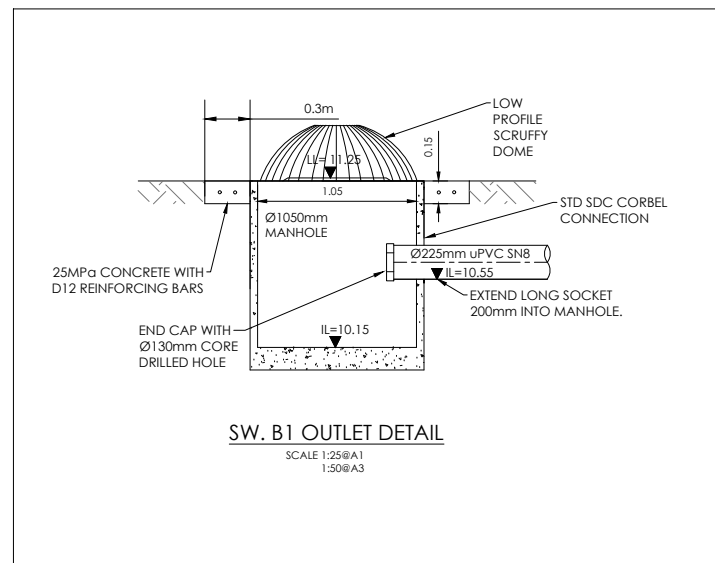
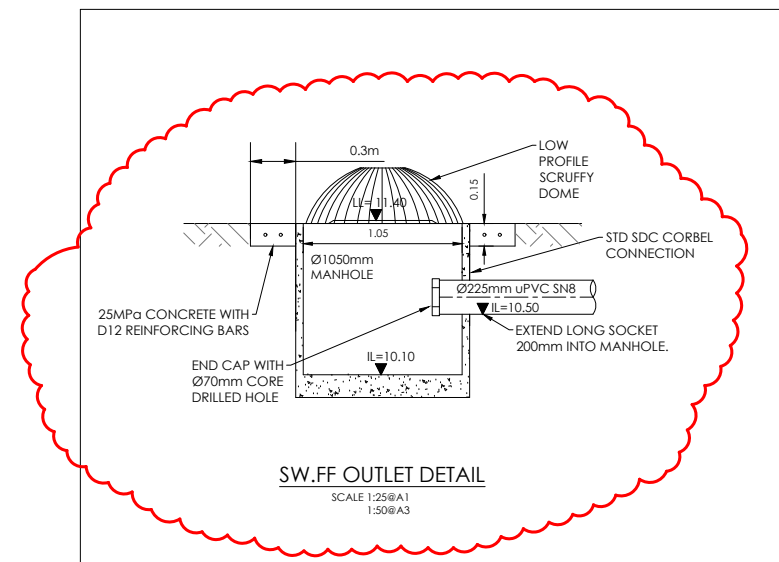
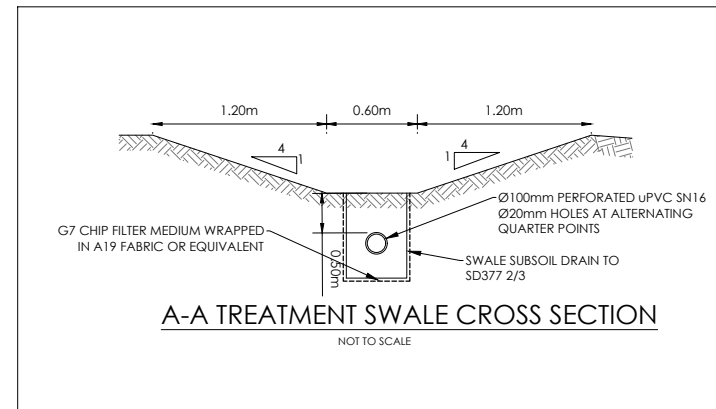
SHEET TITLE:
Sewer & Stormwater Plan

DRAWING STATUS:
For Engineering Approval

SCALE: 1:500@A1 1:1000@A3	DATE: May 2026	DRAWN: JS
CAD FILE: A:\21270\Eng\Drawings\Stages 2 & 7\E21417_E01.0_R8.dwg	SHEET No:	REVISION:
E.21417	E04.1	R8



SWALE 1 PLAN VIEW
SCALES 1:25@A1
1:250@A3



AMENDMENTS :		
AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	NO CHANGE THIS SHEET
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

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LEGEND :			
	STREET LIGHT		EXISTING STREET LIGHT
EXISTING SERVICES		PROPOSED SERVICES	
SANITARY SEWER	STD. MH	SANITARY SEWER	STD. MH
SANITARY SEWER	VENTED MH	SANITARY SEWER	VENTED MH
STORMWATER	MH	STORMWATER	MH
KERB		KERB	CUT DOWN

	NAME	SIGNED	DATE
DESIGNED BY	SAM JONES		
CHECKED BY	TODD INNESS		

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SHEET TITLE:
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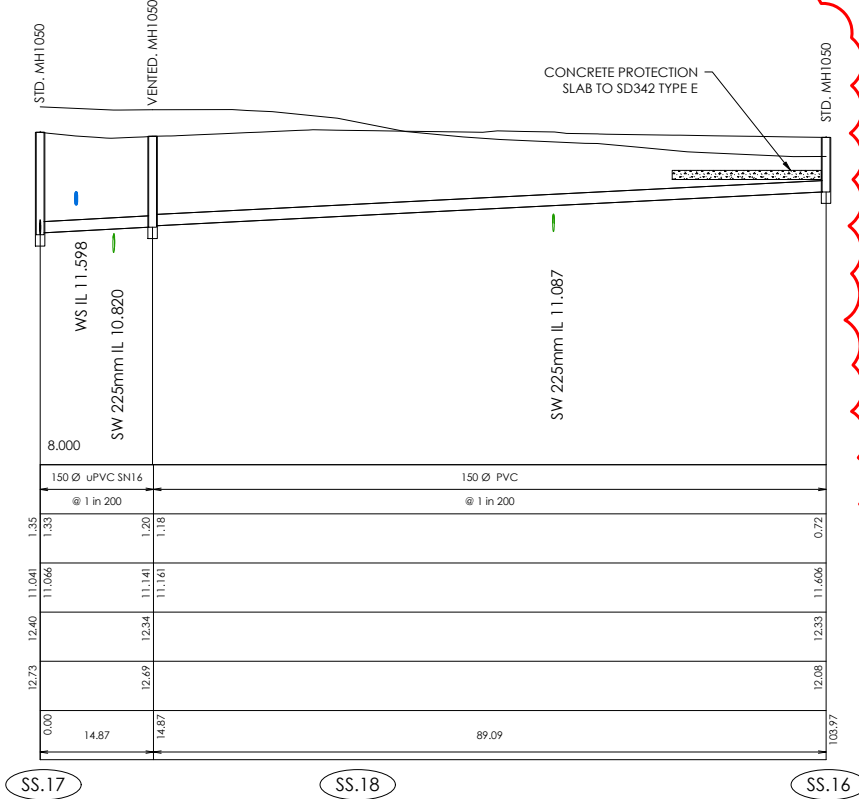
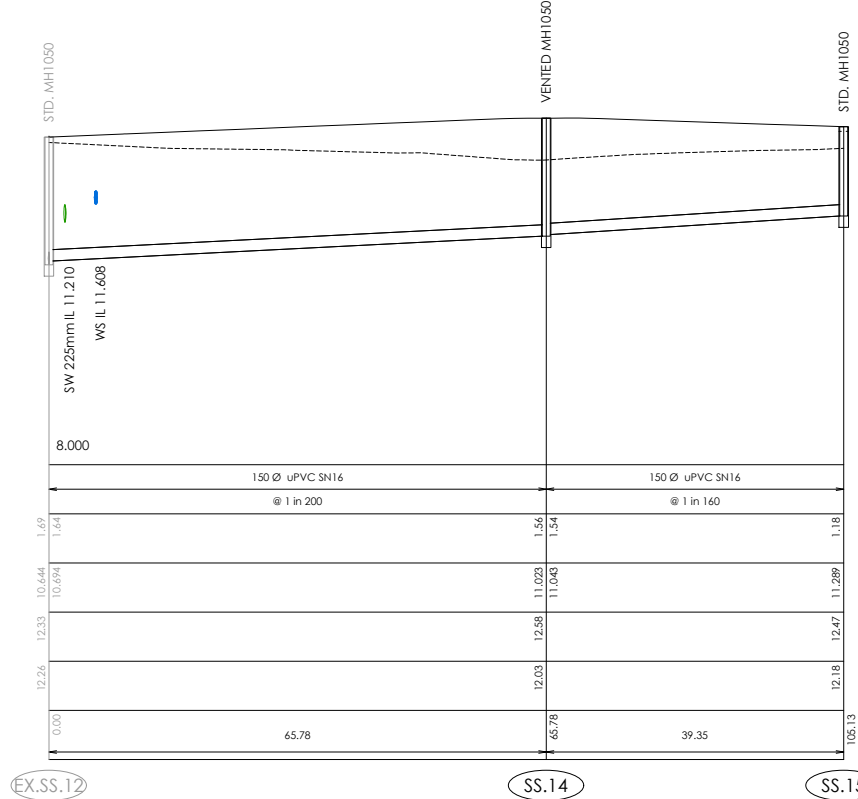
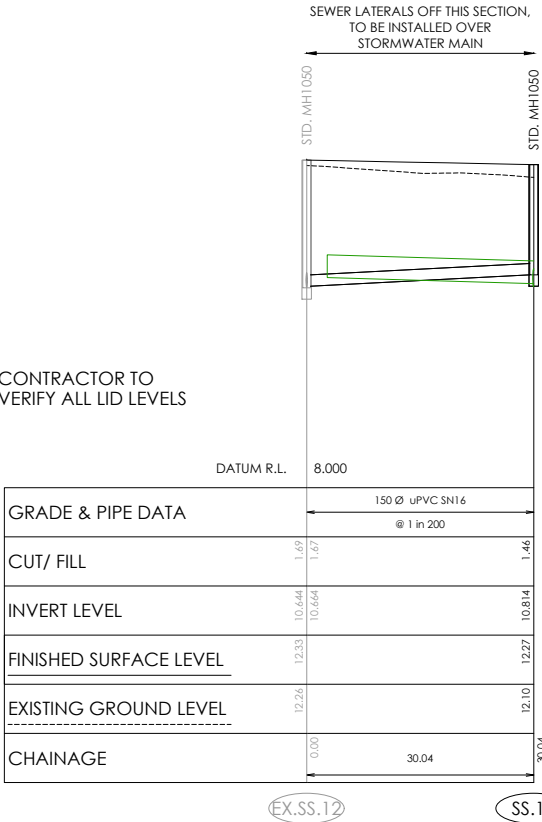
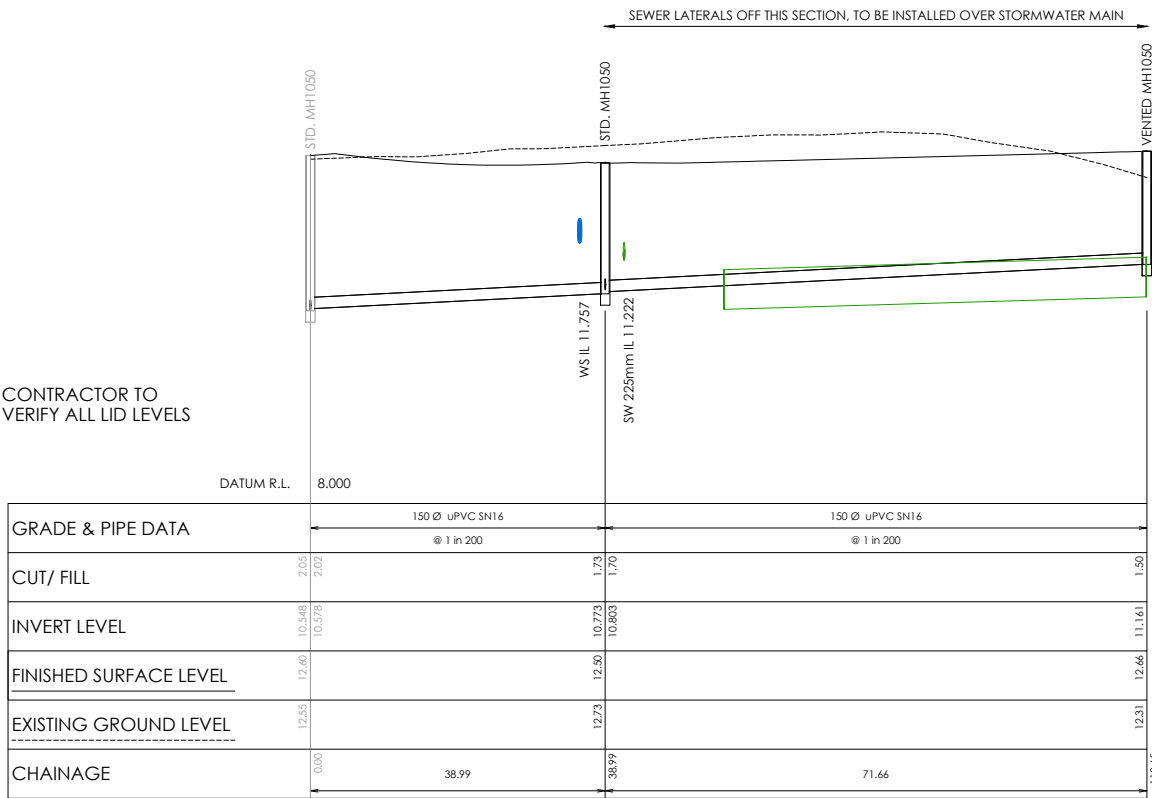
DRAWING STATUS:
For Engineering Approval

SCALE: As Shown DATE: May 2026

CAD FILE: \A\21270\Eng\Drawings\Stages 2 & 7\E21417_E01.0_R8.dwg

DRAWING No: SHEET No: REVISION :

E.21417 E04.2 R8



CONTRACTOR TO VERIFY ALL LID LEVELS

GRADE & PIPE DATA	150 Ø uPVC SN16 @ 1 in 200	150 Ø uPVC SN16 @ 1 in 200
CUT/ FILL	2.03 2.02	1.73 1.70
INVERT LEVEL	10.548 10.576	10.773 10.803
FINISHED SURFACE LEVEL	12.60	12.50
EXISTING GROUND LEVEL	12.55	12.73
CHAINAGE	0.00 38.99	38.99 71.66

CONTRACTOR TO VERIFY ALL LID LEVELS

GRADE & PIPE DATA	150 Ø uPVC SN16 @ 1 in 200
CUT/ FILL	1.69 1.67
INVERT LEVEL	10.644 10.664
FINISHED SURFACE LEVEL	12.33 12.26
EXISTING GROUND LEVEL	12.76
CHAINAGE	0.00 30.04

SEWER LONGSECTION
EX.SS.12 TO SS.15

Scale 1:500 Horiz @A1
1:50 Vert @A1
1:1000 Horiz @A3
1:100 Vert @A3

SEWER LONGSECTION
SS.4 TO SS.20

Scale 1:500 Horiz @A1
1:50 Vert @A1
1:1000 Horiz @A3
1:100 Vert @A3

AMENDMENT	DATE	DESCRIPTION
R4	19/03/26	NO CHANGE THIS SHEET
R6	7/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

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 - ALL UPVC PIPES (WHETHER SEWER OR STORMWATER) SHALL CONFORM TO AS NZS 1260:1999 AND SHALL HAVE THE FOLLOWING STIFFNESS NUMBERS AS SET OUT IN THE STANDARD: DN 100 AND 150...SN16; DN225 AND LARGER ... SN8.
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 - REFER TO LONGSECTIONS FOR ALL SEWER & STORMWATER LEVELS.
 - ORIGIN OF LEVELS
MA&7 DP518987 (F&S)
RL=11.39
LEVELS IN TERMS OF NZVD 2016
 - ALL SEWER AND STORMWATER LATERALS TO BE LAID AT 1:60. MINIMUM GRADE AND LAID TO 1.0m WITHIN LOTS.
 - NOMINATED PIPE SIZES ARE INTERNAL DIAMETER UNLESS NOTED OTHERWISE.
 - ALL RESIDENTIAL STORMWATER LATERALS TO BE 100mm DIAMETER AND INDUSTRIAL LATERALS TO BE A MINIMUM OF 150mm.
 - RAMPED RISERS ARE TO BE USED FOR LATERALS TO ENSURE A MAXIMUM DEPTH OF 1.5m COVER AT THE LOT BOUNDARY.
 - BEDDING TO BE AS PER SD344 UNLESS OTHERWISE SPECIFIED.
 - ALL SUMPS TO HAVE 450mm WETWELL.
 - ALL LATERAL ENDS TO BE MARKED WITH A RED STAKE.
 - MANHOLE CONNECTIONS SHALL BE STARTERS AND SHORTS AND SHORTS AND FINISHERS.
 - LADDERS ARE REQUIRED FOR MANHOLES DEEPER THAN 1.3m WHEN MEASURING FROM THE TOP OF THE BENCHING TO THE FINISHED LEVEL.
 - BC FOR SEPTIC TANK REMOVAL & CONNECTION TO NEW GRAVITY, WILL BE GRANTED ONCE QA FINAL INSPECTIONS AND QA HAS BEEN VETTED BY SDC ENGINEERS.

NAME	SIGNED	DATE
DESIGNED BY SAM JONES		
CHECKED BY TODD INNESS		

DAVIE LOVELL-SMITH
PLANNING SURVEYING ENGINEERING

116 Wrights Road P O Box 679 Christchurch 8140. New Zealand
Telephone: 03 379-0793 Website: www.dls.co.nz E-mail: office@dls.co.nz

JOB TITLE:

**555 Birchs Road &
447 Tancred's Road, Lincoln
Stage 2 & 7**

SHEET TITLE:

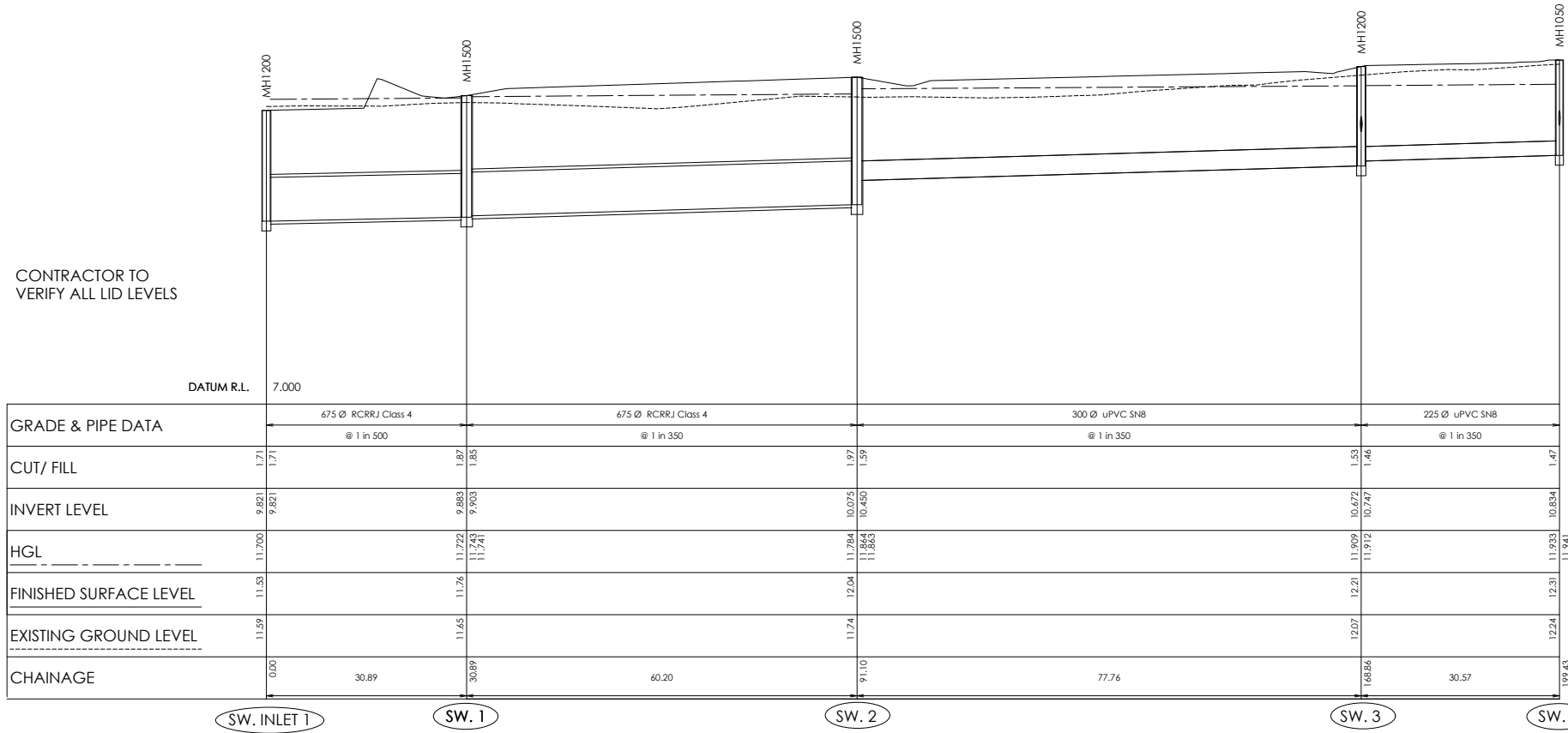
**Sewer
Longsections**

DRAWING STATUS

For Engineering Approval

SCALE: As Shown	DATE: May 2026
CAD FILE : \\21270\Eng\Drawings\Stages 2 & 7\E21417_E043_R8.dwg	DRAWN : JS
DRAWING No : E.21417	SHEET No: E04.3
	REVISION : R8

CONTRACTOR TO
VERIFY ALL LID LEVELS

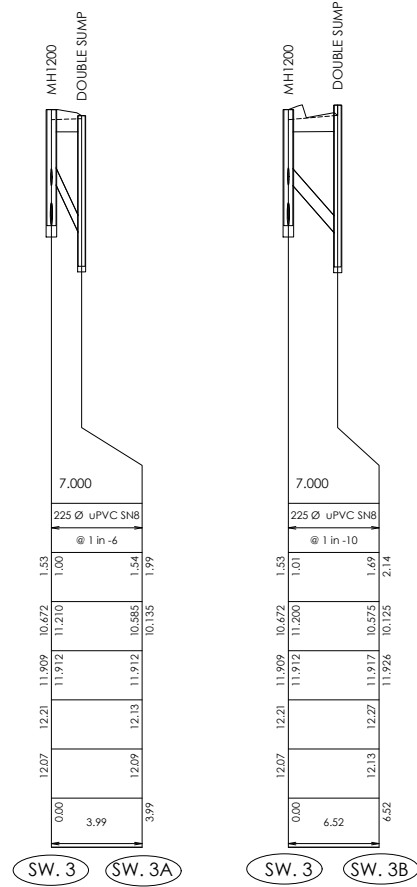


SW LONGSECTION
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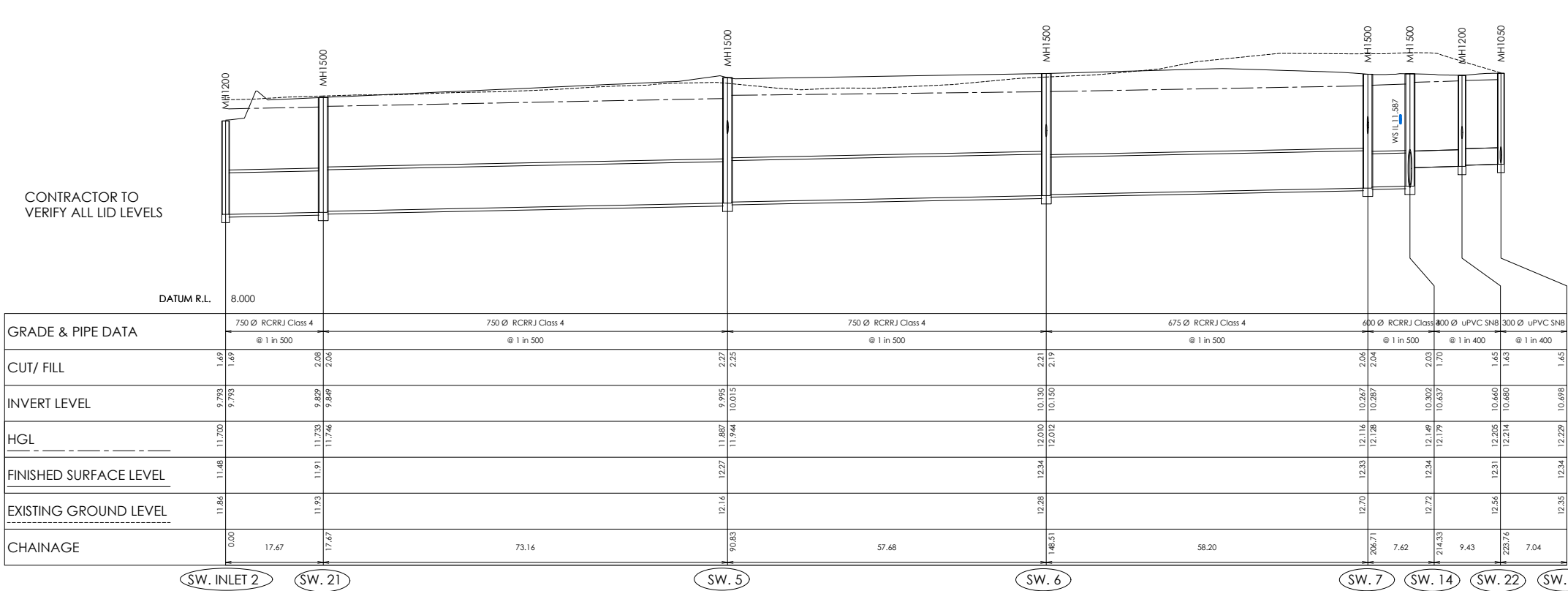
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1:100 Vert @A3

SW LONGSECTION SW.3 TO SW.3A
SW LONGSECTION SW.3 TO SW.3B

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1:1000 Horiz @A3
1:100 Vert @A3



CONTRACTOR TO
VERIFY ALL LID LEVELS

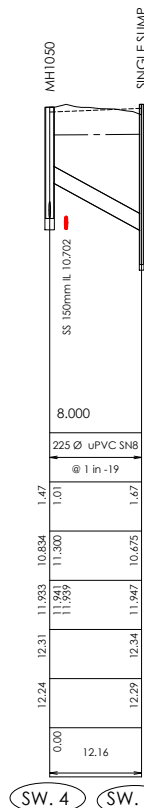


SW LONGSECTION
SW.OUTLET 2 TO SW.18

Scale 1:500 Horiz @A1
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SW LONGSECTION
SW.4 TO SW.4C

Scale 1:500 Horiz @A1
1:50 Vert @A1
1:1000 Horiz @A3
1:100 Vert @A3



AMENDMENTS :		
AMENDMENT	DATE	DESCRIPTION
R4	19/03/26	NO CHANGE THIS SHEET
R6	7/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

- NOTES :
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 - ORIGIN OF LEVELS
MA67 DP518987 (FSJO)
RL=11.39

LEVELS IN TERMS OF NZVD 2016
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 - BC FOR SEPTIC TANK REMOVAL & CONNECTION TO NEW GRAVITY, WILL BE GRANTED ONCE QA FINAL INSPECTIONS AND QA HAS BEEN VETTED BY SDC ENGINEERS.

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DESIGNED BY	SAM JONES		
CHECKED BY	TODD INNESS		



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JOB TITLE:

555 Birchs Road &
447 Tancred's Road, Lincoln
Stage 2 & 7

SHEET TITLE:

Stormwater
Longsections

DRAWING STATUS

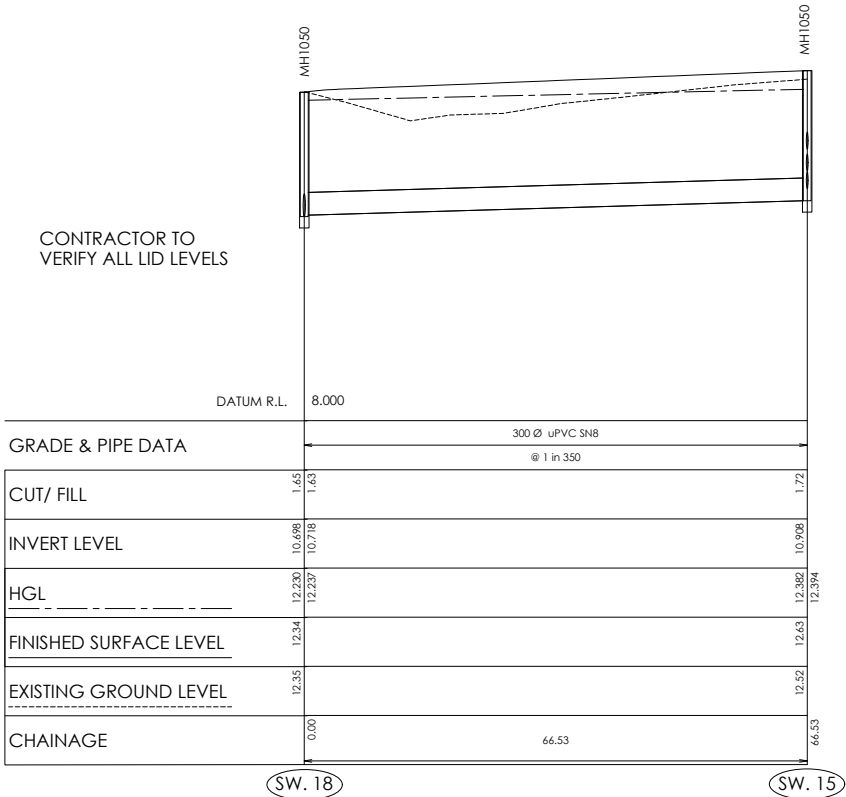
For Engineering Approval

SCALE: As Shown DATE: May 2026

CAD FILE :\\A21270\Eng\Drawings\Stages 2 & 7\E21417_E04.3_R8.dwg DRAWN :JS

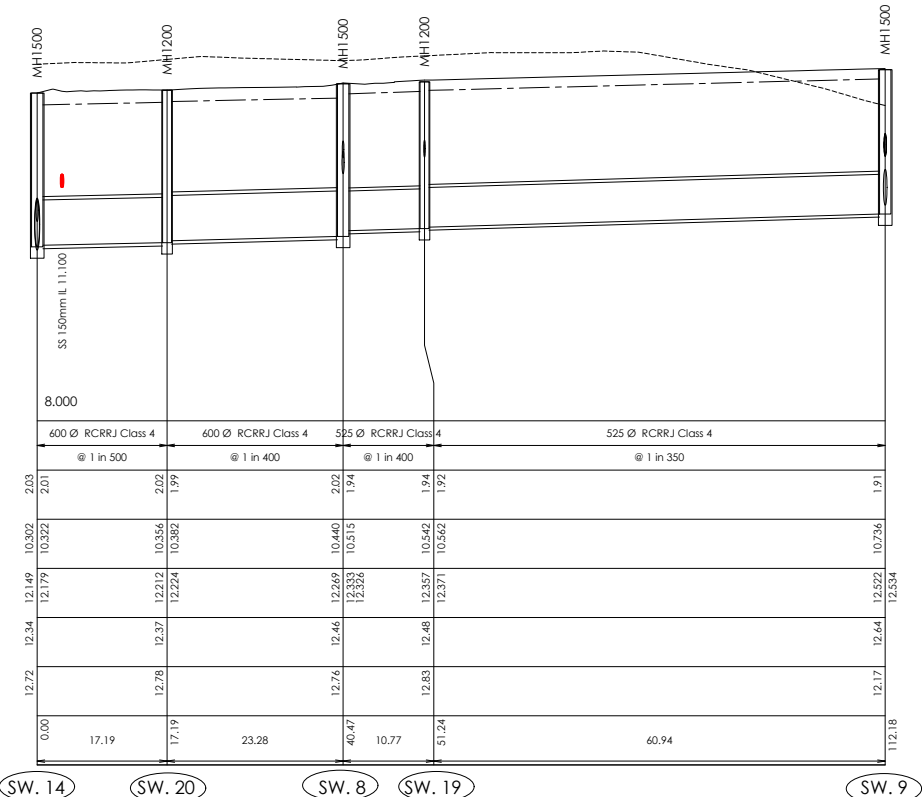
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E.21417 E04.4 R8



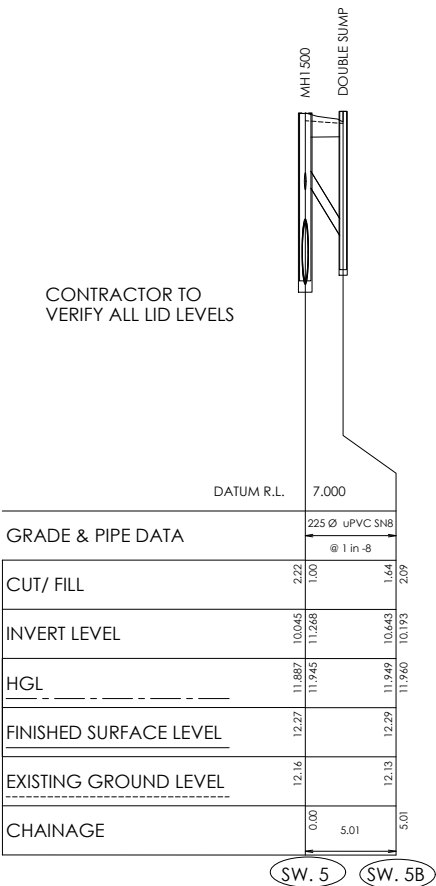
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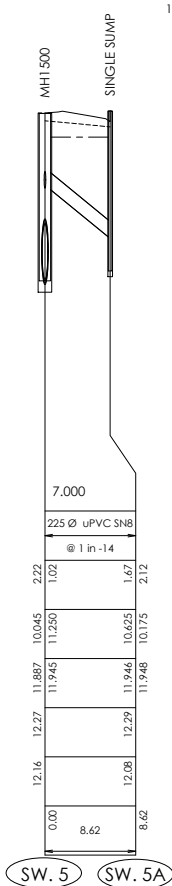
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SW.14 TO SW.9

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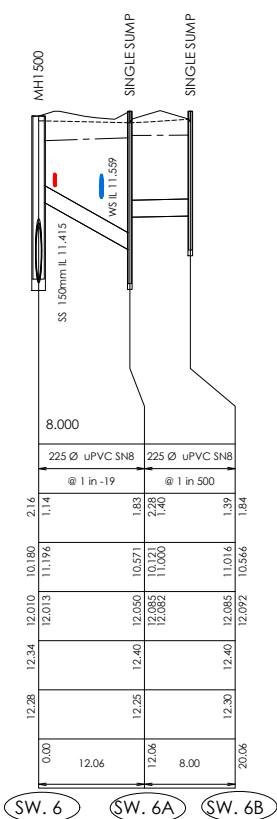
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SW.5 TO SW.5A

Scale 1:500 Horiz
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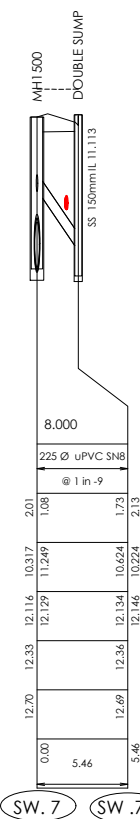
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SW.5 TO SW.5B

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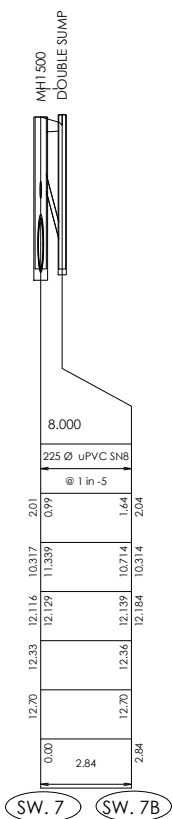
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SW.6 TO SW.6B

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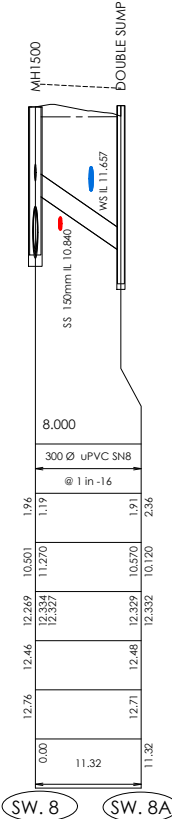
SW LONGSECTION
SW.7 TO SW.7A

Scale 1:500 Horiz
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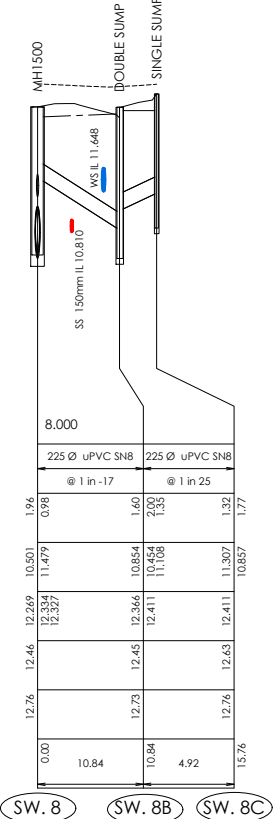
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SW.7 TO SW.7B

Scale 1:500 Horiz
1:50 Vert @A1
1:1000 Horiz
1:100 Vert @A3



SW LONGSECTION
SW.8 TO SW.8A

Scale 1:500 Horiz
1:50 Vert @A1
1:1000 Horiz
1:100 Vert @A3



SW LONGSECTION
SW.8 TO SW.8D

Scale 1:500 Horiz
1:50 Vert @A1
1:1000 Horiz
1:100 Vert @A3

AMENDMENTS :		
AMENDMENT	DATE	DESCRIPTION
R4	19/03/26	NO CHANGE THIS SHEET
R6	7/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

- NOTES :
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 - ORIGIN OF LEVELS
MA67 DP518987 (FSJ0)
RL=11.39

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	NAME	SIGNED	DATE
DESIGNED BY	SAM JONES		
CHECKED BY	TODD INNESS		

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Telephone: 03 379-0793 Website: www.dls.co.nz E-mail: office@dls.co.nz

JOB TITLE:

**555 Birchs Road &
447 Tancreds Road, Lincoln
Stage 2 & 7**

SHEET TITLE:

**Stormwater
Longsections**

DRAWING STATUS

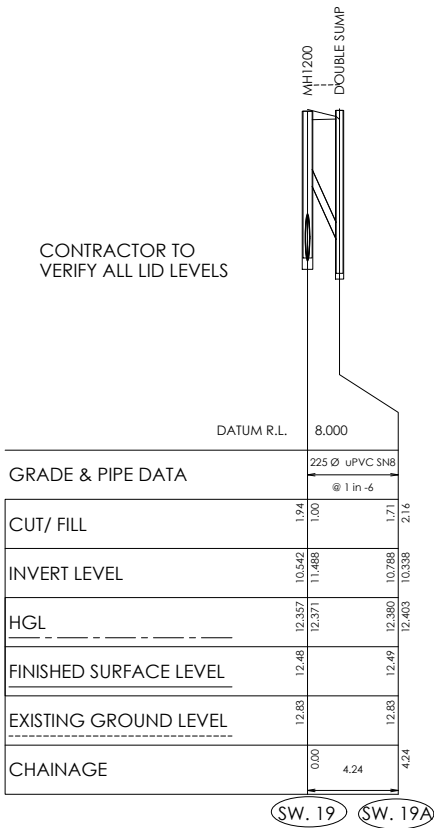
For Engineering Approval

SCALE: As Shown DATE: May 2026

CAD FILE :\\21270\\Eng\\Drawings\\Stages 2 & 7\\E21417_B043_R8.dwg

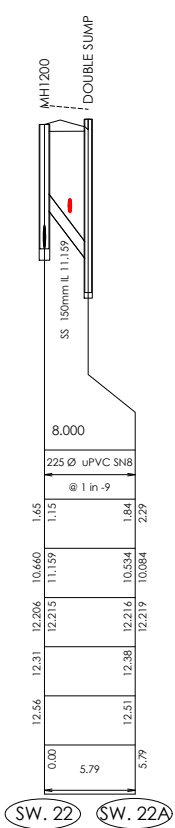
DRAWING No : SHEET No: DRAWN : JS

E.21417 E04.5 R8



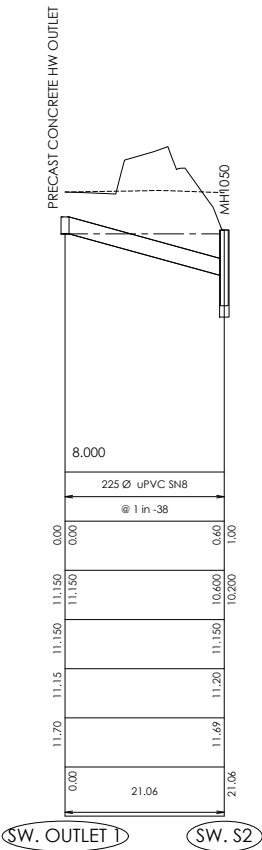
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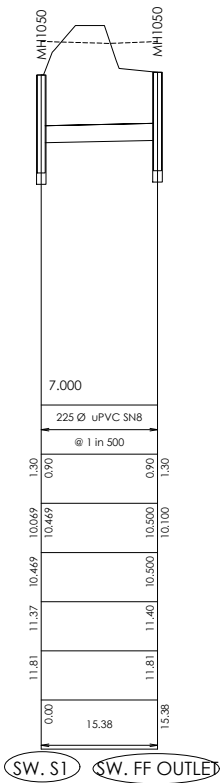
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SW.22 TO SW.22A

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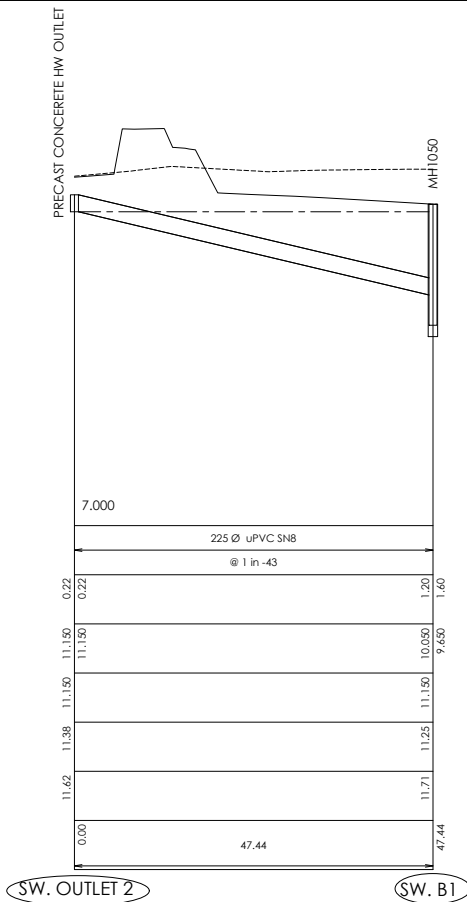
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SW.OUTLET 1 TO SW.S2

Scale 1:500 Horiz @A1
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1:100 Vert @A3



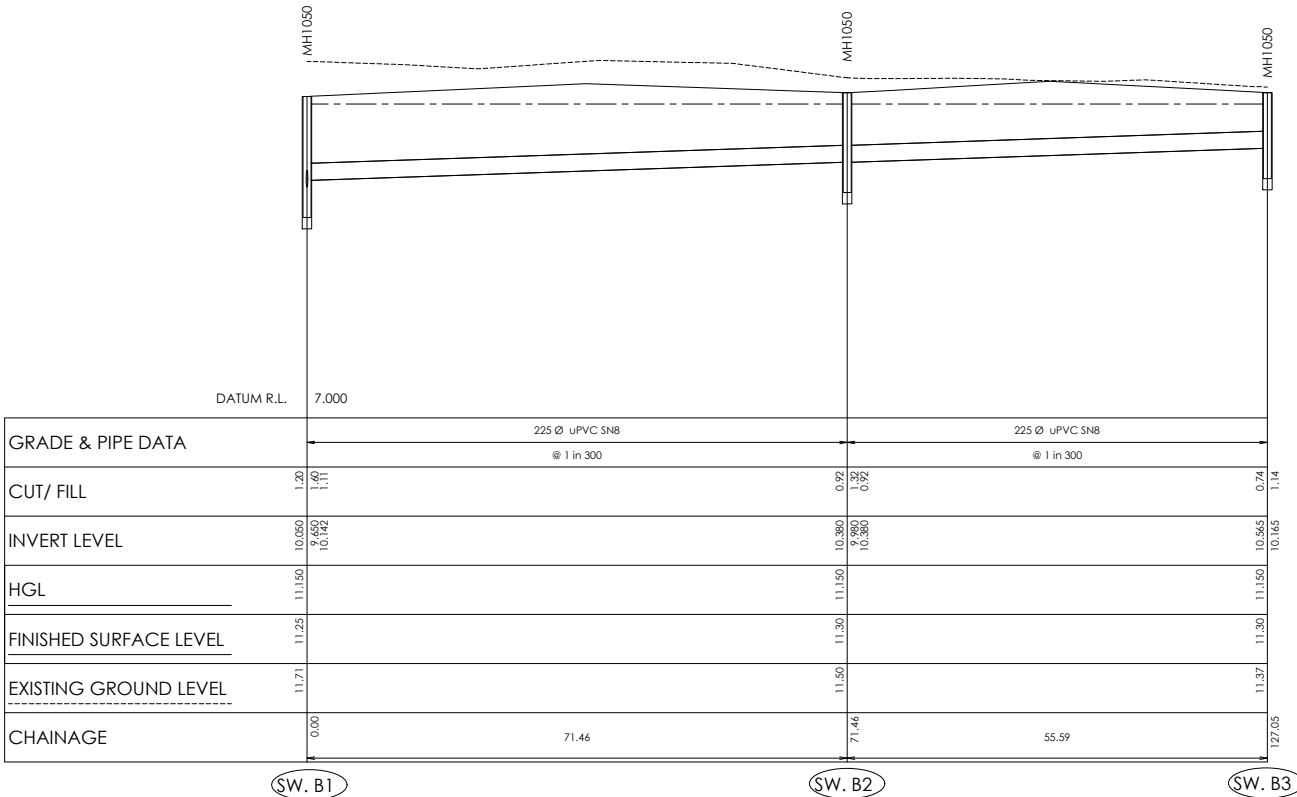
SW LONGSECTION
SW.S1 TO SW.FF OUTLET

Scale 1:500 Horiz @A1
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1:100 Vert @A3



SW LONGSECTION
SW.OUTLET 2 TO SW.B1

Scale 1:500 Horiz @A1
1:50 Vert @A1
1:1000 Horiz @A3
1:100 Vert @A3



SW LONGSECTION
SW.B1 TO SW.B3

Scale 1:500 Horiz @A1
1:50 Vert @A1
1:1000 Horiz @A3
1:100 Vert @A3

AMENDMENTS :		
AMENDMENT	DATE	DESCRIPTION
R4	19/03/26	NO CHANGE THIS SHEET
R6	7/04/26	NO CHANGE THIS SHEET
R8	21/05/26	LONGSECTION ADDED

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MA67 DP518987 (FSJ0)
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CHECKED BY	TODD INNESS		



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JOB TITLE:

**555 Birchs Road &
447 Tancreds Road, Lincoln
Stage 2 & 7**

SHEET TITLE:

**Stormwater
Longsections**

DRAWING STATUS

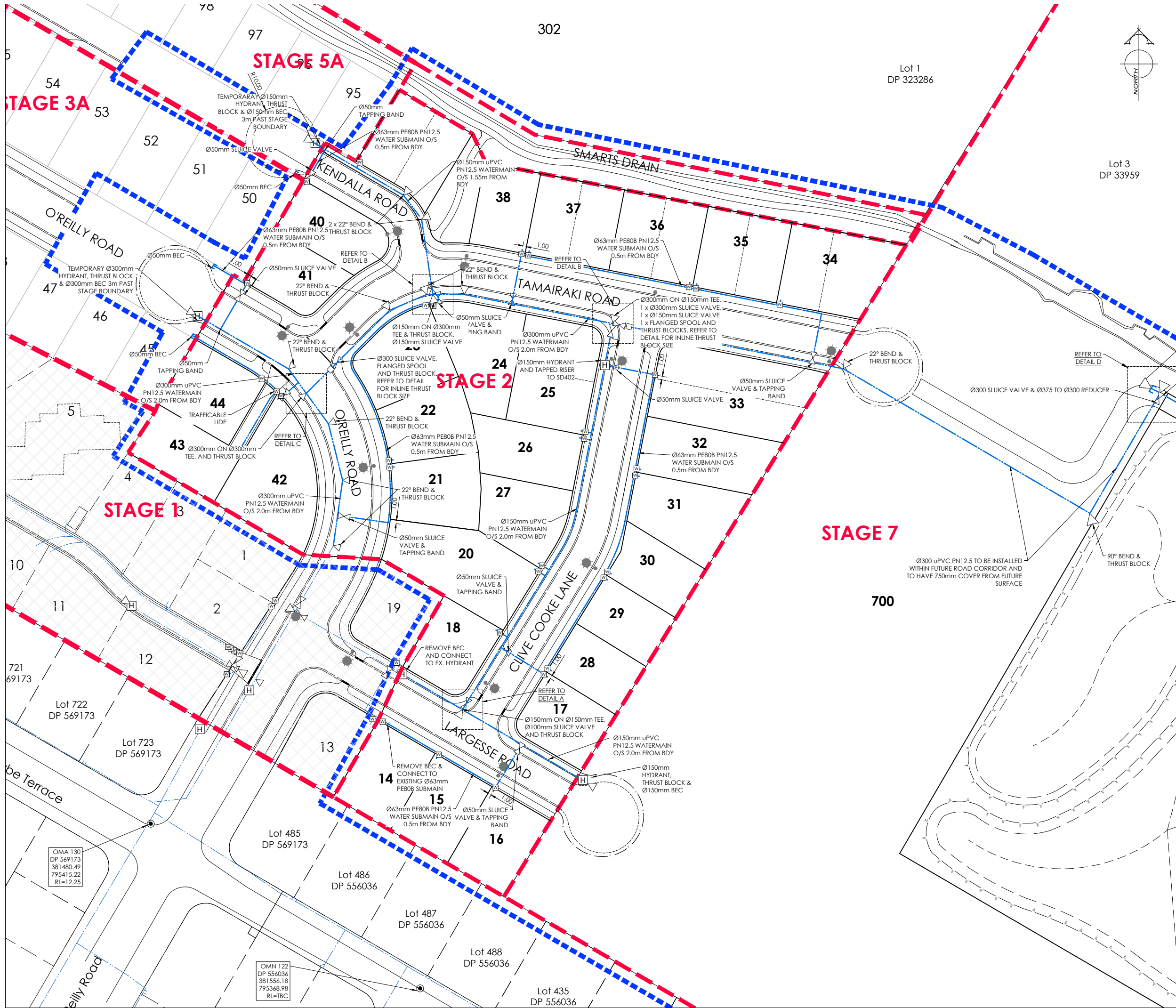
For Engineering Approval

SCALE : As Shown DATE : May 2026

CAD FILE : \\21270\Eng\Drawings\Stages 2 & 7\E21417_B04.3_R8.dwg

DRAWING No : SHEET No : DRAWN : JS

E.21417 **E04.6** **R8**



AMENDMENTS:

AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	WATER CONNECTIONS REMOVED
R7	24/04/26	INLINE THRUST BLOCK ADDED
R8	22/05/26	NO CHANGE THIS SHEET

NOTES:

1.

ALL WORKS IN ACCORDANCE WITH SDC CODE OF PRACTICE PARTS 1-11 STANDARDS. IF STANDARDS ARE UNSPECIFIED REFER TO CCC CSS PARTS 1-7.

2.

ALL PLANS ARE TO BE READ AND DISTRIBUTED AS A COMPLETE SET. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.

3.

TRENCHING AND INSTALLATION OF POWER AND TELECOM SERVICES TO BE PROVIDED IN ACCORDANCE WITH SERVICE PROVIDERS PLANS AND SPECIFICATIONS.

4.

ALL SERVICES TO BE FULLY SEARCHED AND PILOTTED PRIOR TO TRENCHING.

5.

ALL WATER PIPES TO BE PE PN12.5 AND ALL FITTINGS TO BE PN16.

6.

WATERMAINS AND SUBMAINS TO BE INSTALLED AT THE OFFSET STATED ON THE PLAN AND AGREED WITH ENGINEER.

7.

WATERMAINS TO HAVE A MINIMUM COVER OF 0.75m IN ROADS AND 0.6m IN BERMS.

8.

CONTRACTOR TO INSTALL WATER MAIN TO ENSURE NO CLASHES WITH OTHER SERVICES. TO BE INSTALLED IN ACCORDANCE WITH THE IDS 7.9.5.

9.

ALL WATER CONNECTIONS WILL BE MADE IN ACCORDANCE WITH SDC STANDARD WSP005.

10.

BLUE CATS EYES TO BE INSTALLED IN THE CENTRE OF ROADS ADJACENT TO ALL YELLOW PAINTED HYDRANT TRIANGLES.

11.

CHLORINATION POINTS TO BE CONFIRMED DURING CONSTRUCTION.

12.

ALL THRUST BLOCKS TO BE DESIGNED TO NZS4404 WS-004 AND AGREED WITH ENGINEER. THRUST BLOCKS TO BE END BEARING ONTO ORIGINAL SOILS.

MINIMUM THRUST AREA FOR DN300mm PIPE THRUST BLOCKS

TYPE	AREA (sq.m)
90° BEND	2.66
45° BEND	1.44
22.5° BEND	0.74
TEES & DEAD ENDS	1.88

MINIMUM THRUST AREA FOR DN375mm PIPE THRUST BLOCKS

TYPE	AREA (sq.m)
TEES & DEAD ENDS	2.85

LEGEND:

EXISTING SERVICES

WATER

KERB

FH

VALVE

PROPOSED SERVICES

WATER

KERB

FH

VALVE

METER

CUT DOWN

NAME	SIGNED	DATE
DESIGNED BY: SAM JONES		
CHECKED BY: TODD INNESS		

DAVIE LOVELL-SMITH
PLANNING SURVEYING ENGINEERING

116 Wrights Road P O Box 679 Christchurch 8140. New Zealand
Telephone: 03 379-0793 Website: www.dls.co.nz E-mail: office@dls.co.nz

JOB TITLE:
**Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7**

SHEET TITLE:
Water Plan

DRAWING STATUS:
For Engineering Approval

SCALE: 1:500@A1
1:1000@A3

DATE: May 2026

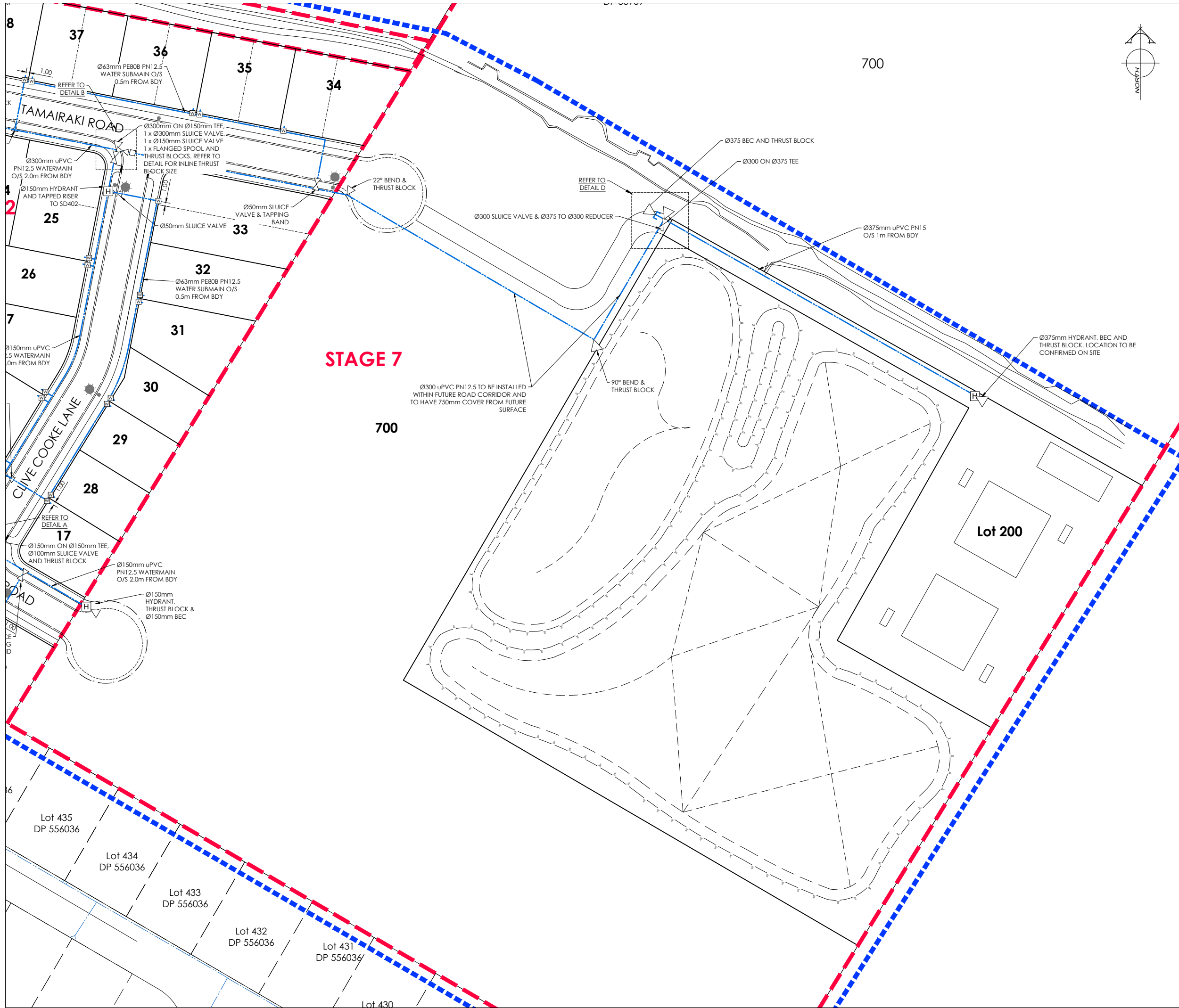
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DRAWING No: E.21417

SHEET No: E05.0

REVISION: R8

DRAWN: JS



AMENDMENTS:

AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	WATER CONNECTIONS REMOVED
R7	24/04/26	NO CHANGE THIS SHEET
R8	22/05/26	NO CHANGE THIS SHEET

NOTES:

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- ALL SERVICES TO BE FULLY SEARCHED AND PILOTTED PRIOR TO TRENCHING.
- ALL WATER PIPES TO BE PE PN12.5 AND ALL FITTINGS TO BE PN16.
- WATERMAINS AND SUBMAINS TO BE INSTALLED AT THE OFFSET STATED ON THE PLAN AND AGREED WITH ENGINEER.
- WATERMAINS TO HAVE A MINIMUM COVER OF 0.75m IN ROADS AND 0.6m IN BERMS.
- CONTRACTOR TO INSTALL WATER MAIN TO ENSURE NO CLASHES WITH OTHER SERVICES. TO BE INSTALLED IN ACCORDANCE WITH THE IDS 7.9.5.
- ALL WATER CONNECTIONS WILL BE MADE IN ACCORDANCE WITH SDC STANDARD WSP005.
- BLUE CATS EYES TO BE INSTALLED IN THE CENTRE OF ROADS ADJACENT TO ALL YELLOW PAINTED HYDRANT TRIANGLES.
- CHLORINATION POINTS TO BE CONFIRMED DURING CONSTRUCTION.
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MINIMUM THRUST AREA FOR DN300mm PIPE THRUST BLOCKS

TYPE	AREA (sq.m)
90° BEND	2.66
45° BEND	1.44
22.5° BEND	0.74
TEES & DEAD ENDS	1.88

MINIMUM THRUST AREA FOR DN375mm PIPE THRUST BLOCKS

TYPE	AREA (sq.m)
TEES & DEAD ENDS	2.85

LEGEND:

EXISTING SERVICES

WATER

KERB

PROPOSED SERVICES

WATER

KERB

NAME

SIGNED

DATE

DESIGNED BY

CHECKED BY

DAVIE LOVELL-SMITH

PLANNING SURVEYING ENGINEERING

116 Wrights Road P O Box 679 Christchurch 8140. New Zealand
Telephone: 03 379-0793 Website: www.dls.co.nz E-mail: office@dls.co.nz

JOB TITLE:

**Birchfield Estates Ltd
RC245532 & RC245534
Stages 2 & 7**

SHEET TITLE:

Water Plan

DRAWING STATUS

For Engineering Approval

SCALE:

1:750@A1
1:1500@A3

DATE:

May 2026

CAD FILE:

\\21270\Eng\Drawings\Stages 2 & 7\E21417_E01.0_R8.dwg

DRAWING No:

E.21417

SHEET No:

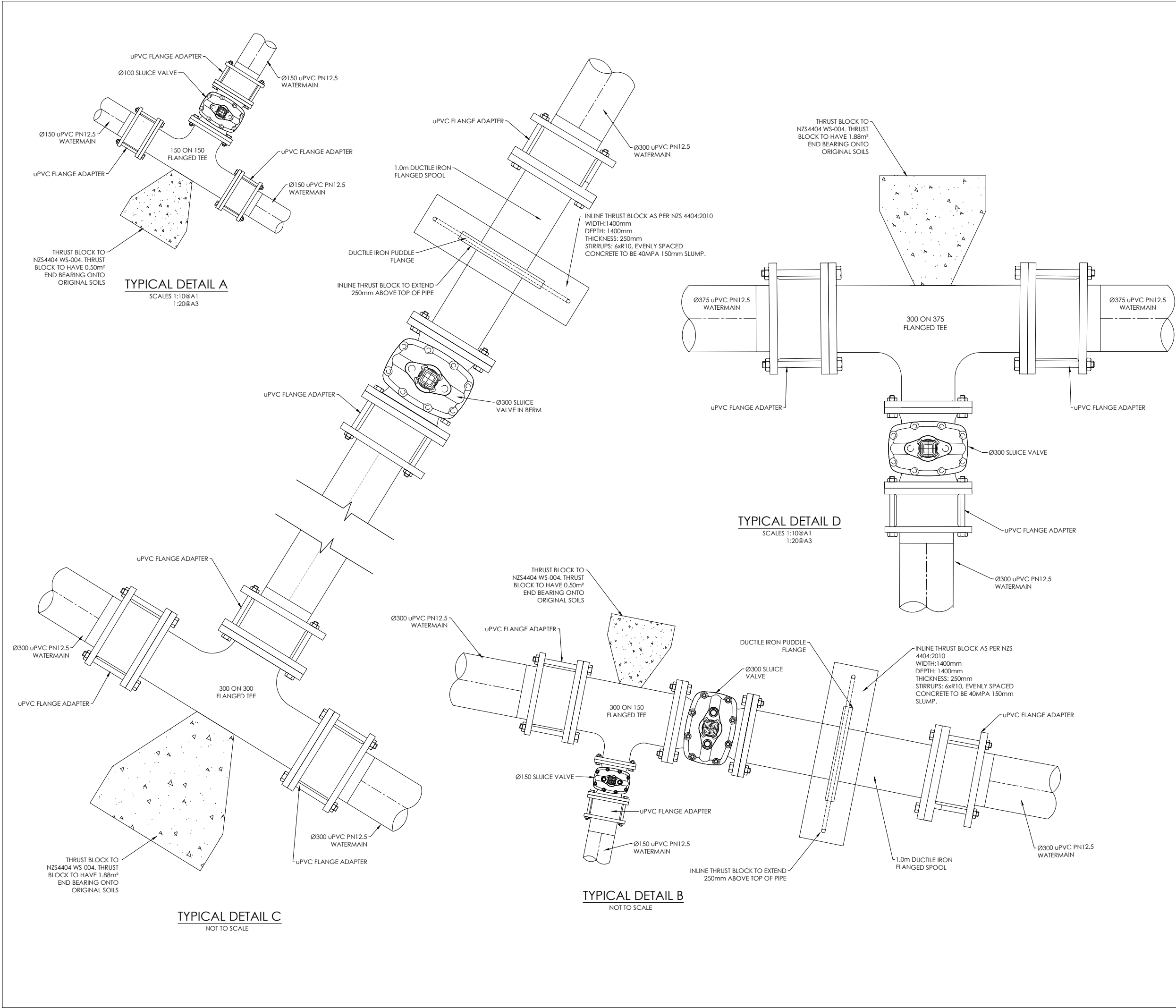
E05.1

DRAWN:

JS

REVISION:

R8



AMENDMENTS :

AMENDMENT	DATE	DESCRIPTION
R6	7/04/26	NO CHANGE THIS SHEET
R7	24/04/26	DETAILS UPDATED
R8	22/05/26	NO CHANGE THIS SHEET

NOTES :

1.

ALL WORKS IN ACCORDANCE WITH SDC CODE OF PRACTICE PARTS 1-11 STANDARDS, IF STANDARDS ARE UNSPECIFIED REFER TO CCC CSS PARTS 1-7.

2.

ALL PLANS ARE TO BE READ AND DISTRIBUTED AS A COMPLETE SET. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION.

3.

TRENCHING AND INSTALLATION OF POWER AND TELECOM SERVICES TO BE PROVIDED IN ACCORDANCE WITH SERVICE PROVIDERS PLANS AND SPECIFICATIONS.

4.

ALL SERVICES TO BE FULLY SEARCHED AND PILOTTED PRIOR TO TRENCHING.

5.

ALL WATER PIPES TO BE PE PN12.5 AND ALL FITTINGS TO BE PN16.

6.

WATERMAINS AND SUBMAINS TO BE INSTALLED AT THE OFFSET STATED ON THE PLAN AND AGREED WITH ENGINEER.

7.

WATERMAINS TO HAVE A MINIMUM COVER OF 0.75m IN ROADS AND 0.6m IN BERMS.

8.

CONTRACTOR TO INSTALL WATER MAIN TO ENSURE NO CLASHES WITH OTHER SERVICES. TO BE INSTALLED IN ACCORDANCE WITH THE IDS 7.9.5.

9.

ALL WATER CONNECTIONS WILL BE MADE IN ACCORDANCE WITH SDC STANDARD WSP005.

10.

BLUE CATS EYES TO BE INSTALLED IN THE CENTRE OF ROADS ADJACENT TO ALL YELLOW PAINTED HYDRANT TRIANGLES.

11.

CHLORINATION POINTS TO BE CONFIRMED DURING CONSTRUCTION.

12.

ALL THRUST BLOCKS TO BE DESIGNED TO NZS4404 WS-004 AND AGREED WITH ENGINEER. THRUST BLOCKS TO BE END BEARING ONTO ORIGINAL SOILS.

MINIMUM THRUST AREA FOR DN300mm PIPE THRUST BLOCKS

TYPE	AREA (sq.m)
90° BEND	2.66
45° BEND	1.44
22.5° BEND	0.74
TEES & DEAD ENDS	1.88

MINIMUM THRUST AREA FOR DN375mm PIPE THRUST BLOCKS

TYPE	AREA (sq.m)
TEES & DEAD ENDS	2.85

	NAME	SIGNED	DATE
DESIGNED BY	SAM JONES		
CHECKED BY	TODD INNESS		

DAVIE LOVELL-SMITH

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DRAWING No : E.21417

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