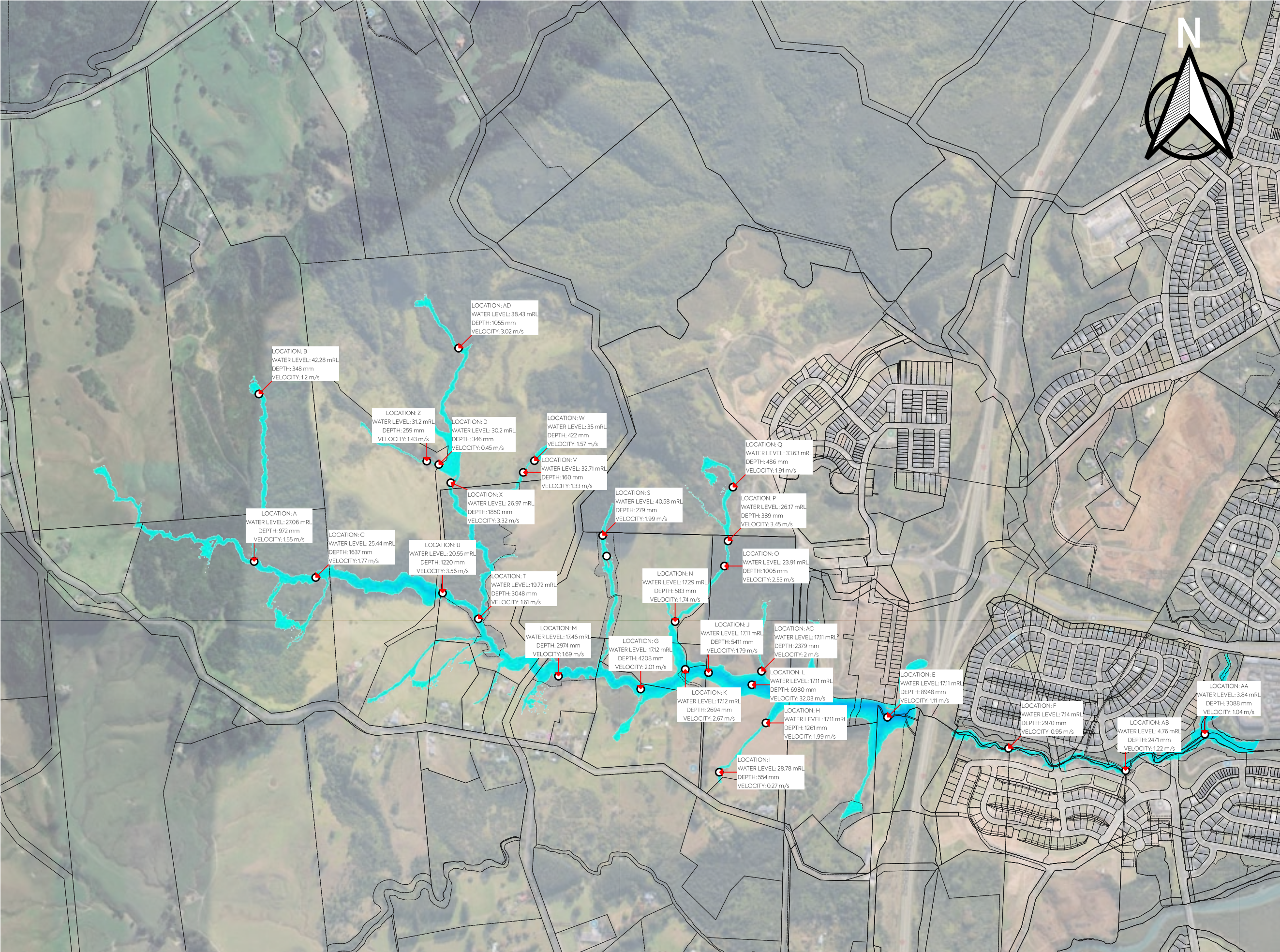




- NOTES:
1. SCENARIO ID ISEXD38CC001AEPTWBBASE_EXT ,SCENARIO NUMBER 8.
 2. 1% AEP SCENARIO, WITH 3.8 DEGREE CLIMATE CHANGE, LAND USE IS CURRENT (PRE-EXISTING).
 3. COMPARISON AGAINST EXISTING DEVELOPMENT (EXD38CC001AEPTWBBASE_EXT, SCENARIO 8) IS SHOWN ON PLAN 4502.
 4. CONTOUR INTERVAL IS 2.5m

LEGEND:

CROSS SECTION

CONTOURS

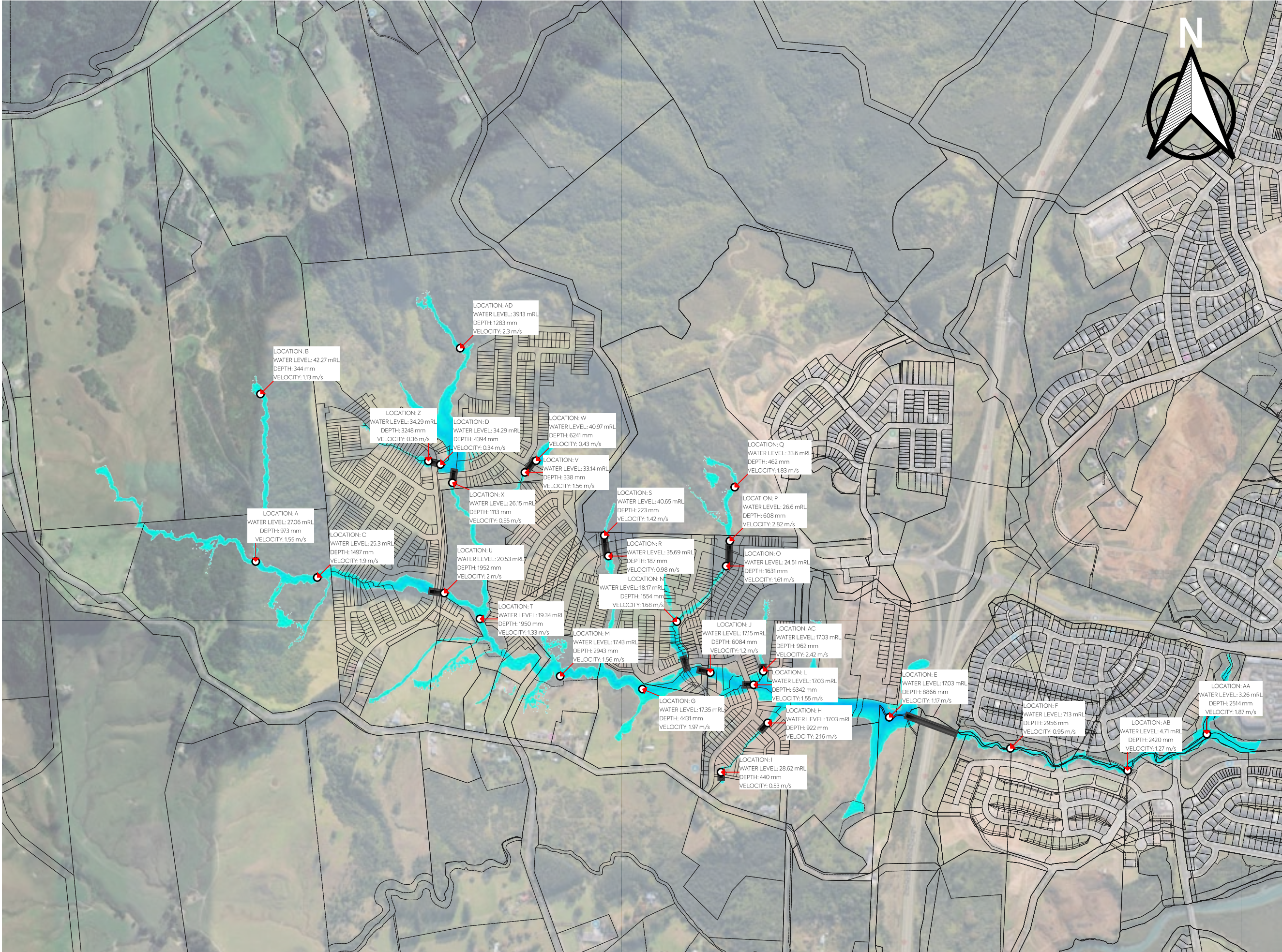
- 2.5 (MINOR)
- 10 (MAJOR)

FLOOD DEPTH (SCENARIO 9)

Band 1 (Gray)

<= 0.8000
0.8000 - 1.6000
1.6000 - 2.4000
2.4000 - 3.2000
3.2000 - 4.0000
4.0000 - 4.8000
4.8000 - 5.6000
5.6000 - 6.4000
6.4000 - 7.2000
7.2000 - 8.0000
8.0000 - 8.8000
8.8000 - 9.6000
9.6000 - 10.4000
10.4000 - 11.2000
11.2000 - 12.0000
12.0000 - 12.8000
12.8000 - 13.6000
13.6000 - 14.4000
14.4000 - 15.2000
> 15.2000

MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016



- NOTES:
1. SCENARIO ID IS MPD38CC001AEPWBBASE_PDT, SCENARIO NUMBER 5.
 2. 1% AEP SCENARIO, WITH 3.8 DEGREE CLIMATE CHANGE, LAND USE IS MAXIMUM PROBABLE DEVELOPMENT WITHIN THE DELMORE SITE, MPD OUTSIDE THE DEVELOPMENT THAT ARE WITHIN FUZ.
 3. CONTOUR INTERVAL IS 2.5m

LEGEND:

— CROSS SECTION

Proposed Culverts

CONTOURS

— 2.5 (MINOR)

— 10 (MAJOR)

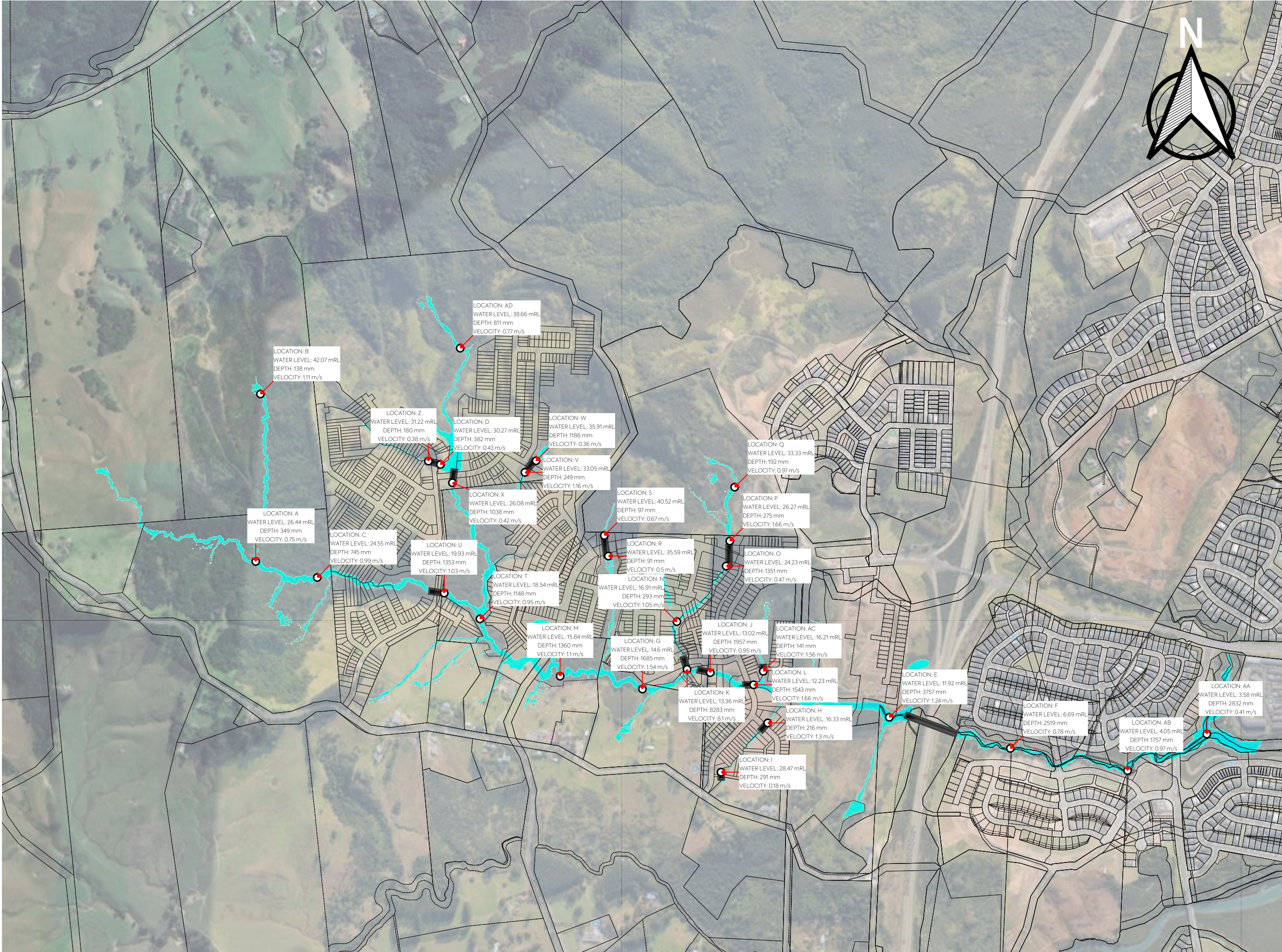
FLOOD DEPTH (SCENARIO 9)

Band 1 (Gray)

	<= 0.8000
	0.8000 - 1.6000
	1.6000 - 2.4000
	2.4000 - 3.2000
	3.2000 - 4.0000
	4.0000 - 4.8000
	4.8000 - 5.6000
	5.6000 - 6.4000
	6.4000 - 7.2000
	7.2000 - 8.0000
	8.0000 - 8.8000
	8.8000 - 9.6000
	9.6000 - 10.4000
	10.4000 - 11.2000
	11.2000 - 12.0000
	12.0000 - 12.8000
	12.8000 - 13.6000
	13.6000 - 14.4000
	14.4000 - 15.2000
	> 15.2000

MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

CLIENT:					PROJECT:					TITLE:					PURPOSE OF ISSUE:				
VINEWAY LIMITED					DELMORE					STORMWATER					FOR DISCUSSION ONLY				
53A, 53B & 55 RUSSELL ROAD					OREWA					FLOOD ASSESSMENT					SCALE:				
										1% AEP POST-DEVELOPMENT					1:10,000				
										FLOOD PLAIN PLAN (3.8D CC) - FUZ					DRAWING NO:				
										3725-0-4505					REV:				
															B				



- NOTES:
1. SCENARIO ID IS D_MPD21CC050AEPWBASE_PDT ,SCENARIO NUMBER 16.
 2. 50% AEP SCENARIO, WITH 2.1 DEGREE CLIMATE CHANGE, LAND USE IS MAXIMUM PROBABLE DEVELOPMENT WITHIN THE DELMORE SITE, EXISTING OUTSIDE THE DEVELOPMENT SITE.
 3. COMPARISON AGAINST EXISTING DEVELOPMENT (EXD21CC050AEPWBBASE_EXT, SCENARIO 13) IS SHOWN ON PLAN 4507.
 4. CONTOUR INTERVAL IS 2.5m

LEGEND:

CROSS SECTION

Proposed Culverts

CONTOURS

- 2.5 (MINOR)
- 10 (MAJOR)

FLOOD DEPTH (SCENARIO 9)

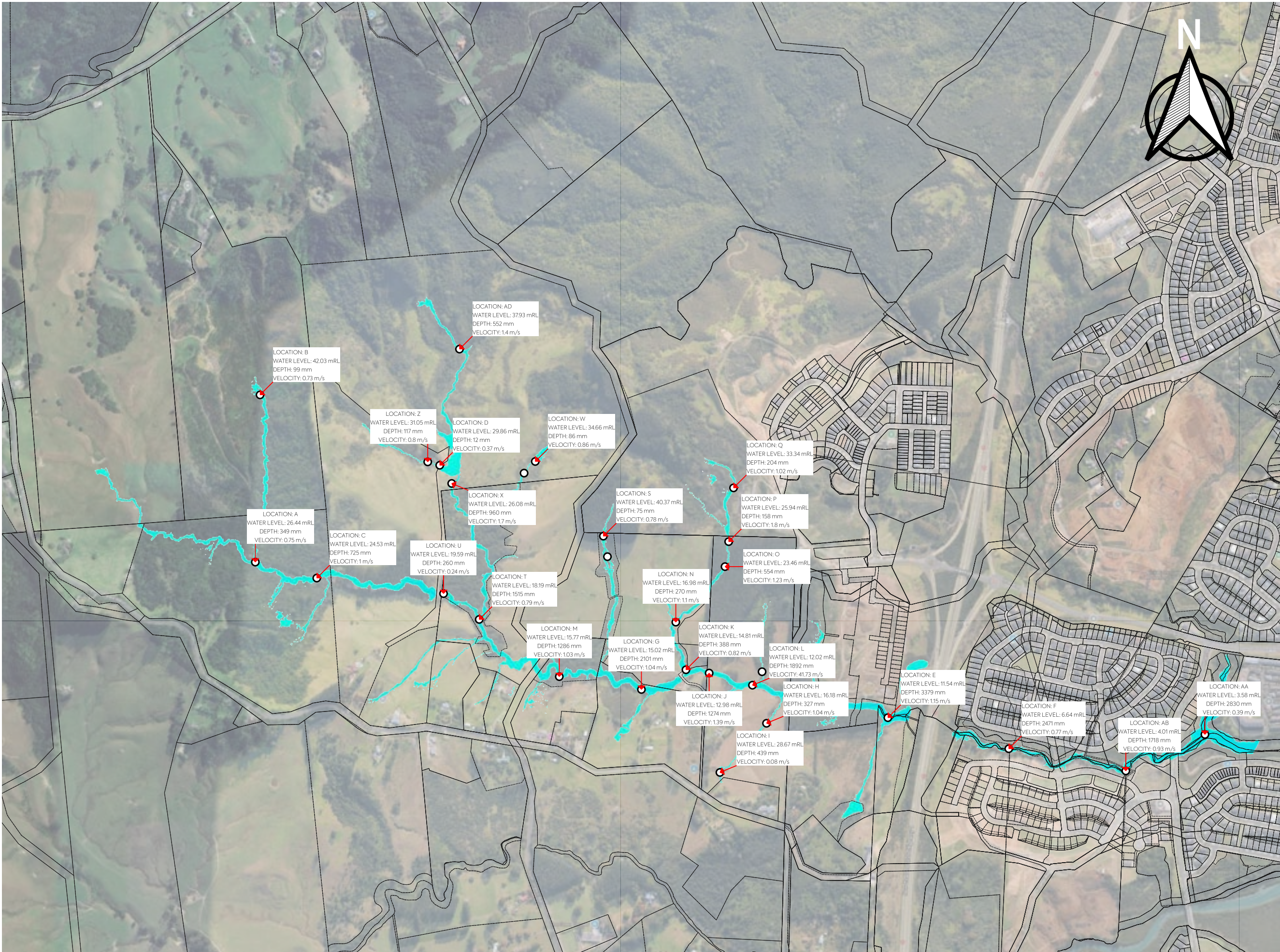
Band 1 (Gray)

<= 0.8000
0.8000 - 1.6000
1.6000 - 2.4000
2.4000 - 3.2000
3.2000 - 4.0000
4.0000 - 4.8000
4.8000 - 5.6000
5.6000 - 6.4000
6.4000 - 7.2000
7.2000 - 8.0000
8.0000 - 8.8000
8.8000 - 9.6000
9.6000 - 10.4000
10.4000 - 11.2000
11.2000 - 12.0000
12.0000 - 12.8000
12.8000 - 13.6000
13.6000 - 14.4000
14.4000 - 15.2000
> 15.2000

MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

CLIENT:					PROJECT:					TITLE:					PURPOSE OF ISSUE:				
VINEWAY LIMITED					DELMORE					STORMWATER					FOR DISCUSSION ONLY				
					53A, 53B & 55 RUSSELL ROAD					FLOOD ASSESSMENT					SCALE:				
					OREWA					50% AEP POST-DEVELOPMENT					1:10,000				
										FLOOD PLAIN PLAN (2.1D CC)					DRAWING NO:				
															3725-0-4506				
															REV:				
															A				





- NOTES:
1. SCENARIO ID IS EXD21CC050AEPWABASE_EXT ,SCENARIO NUMBER 13.
 2. 50% AEP SCENARIO, WITH 2.1 DEGREE CLIMATE CHANGE, LAND USE IS CURRENT (PRE-EXISTING).
 3. CONTOUR INTERVAL IS 2.5m

LEGEND:

CROSS SECTION

CONTOURS

- 2.5 (MINOR)
- 10 (MAJOR)

FLOOD DEPTH (SCENARIO 9)

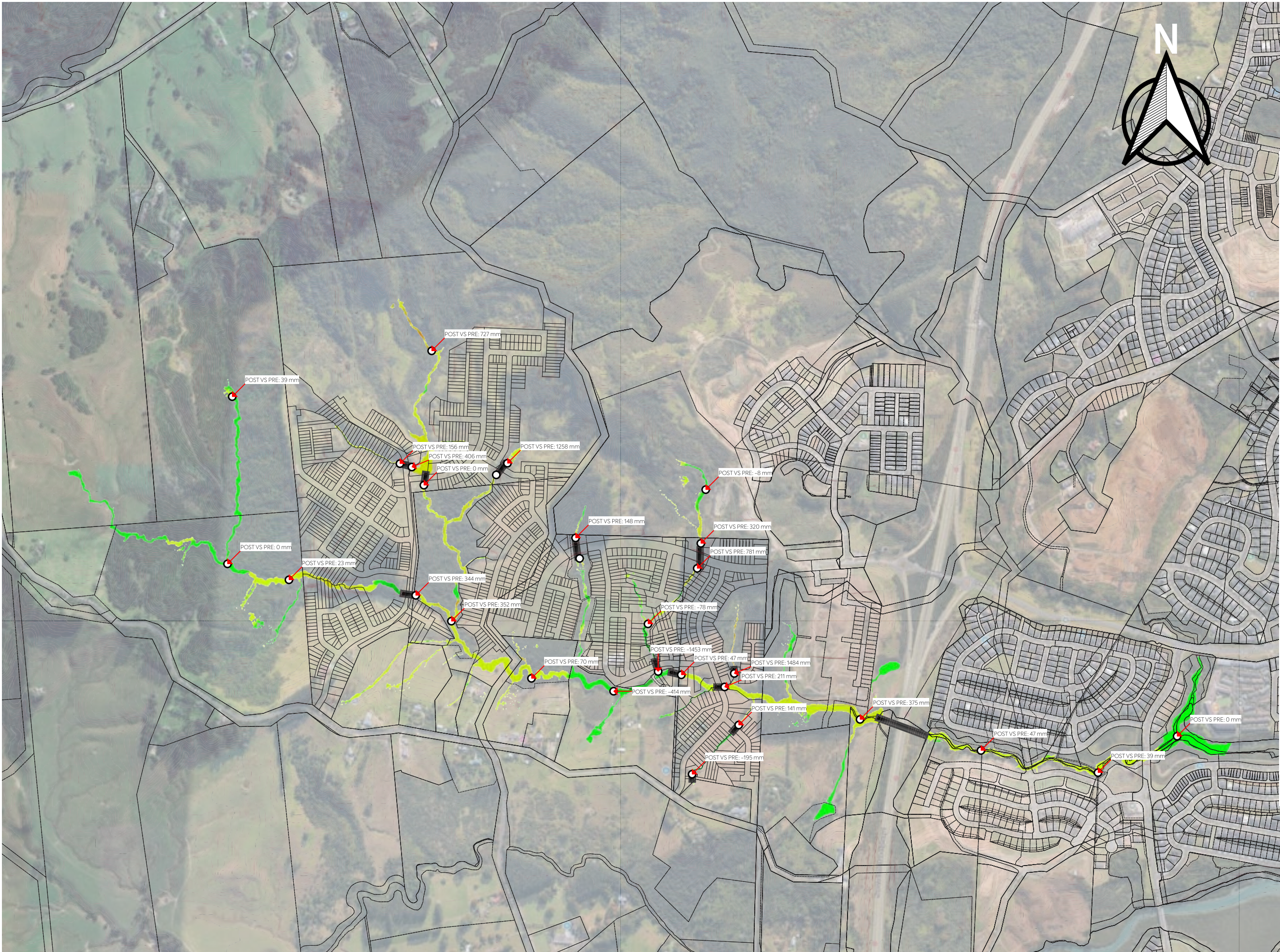
Band 1 (Gray)

	<= 0.8000
	0.8000 - 1.6000
	1.6000 - 2.4000
	2.4000 - 3.2000
	3.2000 - 4.0000
	4.0000 - 4.8000
	4.8000 - 5.6000
	5.6000 - 6.4000
	6.4000 - 7.2000
	7.2000 - 8.0000
	8.0000 - 8.8000
	8.8000 - 9.6000
	9.6000 - 10.4000
	10.4000 - 11.2000
	11.2000 - 12.0000
	12.0000 - 12.8000
	12.8000 - 13.6000
	13.6000 - 14.4000
	14.4000 - 15.2000
	> 15.2000

MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

CLIENT:					PROJECT:					TITLE:					PURPOSE OF ISSUE:				
VINEWAY LIMITED					DELMORE					STORMWATER					FOR CONSENT				
53A, 53B & 55 RUSSELL ROAD					FLOOD ASSESSMENT					SCALE:					1:10,000				
OREWA					50% AEP PRE-DEVELOPMENT					DRAWING NO:					3725-0-4507				
					FLOOD PLAIN PLAN (2.1D CC)					REV:					B				





NOTES:

1. COMPARISON IS FOR 50% AEP STORM EVENT FOR PRE- AND POST- DEVELOPMENT SCENARIO.

2. SCENARIOS FOR COMPARISON IS SCENARIO 16 (D_MPD21CC050AEPWBWBASE_PDT) AND SCENARIO 13 (EXD21CC050AEPWBWBASE_EXT)



MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

PURPOSE OF ISSUE:
FOR CONSENT

SCALE:
1:10,000

DRAWING NO:
3725-0-4508

REV:
B

REV	DESCRIPTION	DRN	BYCHK	BY APP	BY DATE
B	MODELLING UPDATE	HS	-	-	21/07/25
A	FIRST ISSUE	HS	-	-	16/01/2025

PLOT DATE ----



MCKENZIE & CO.

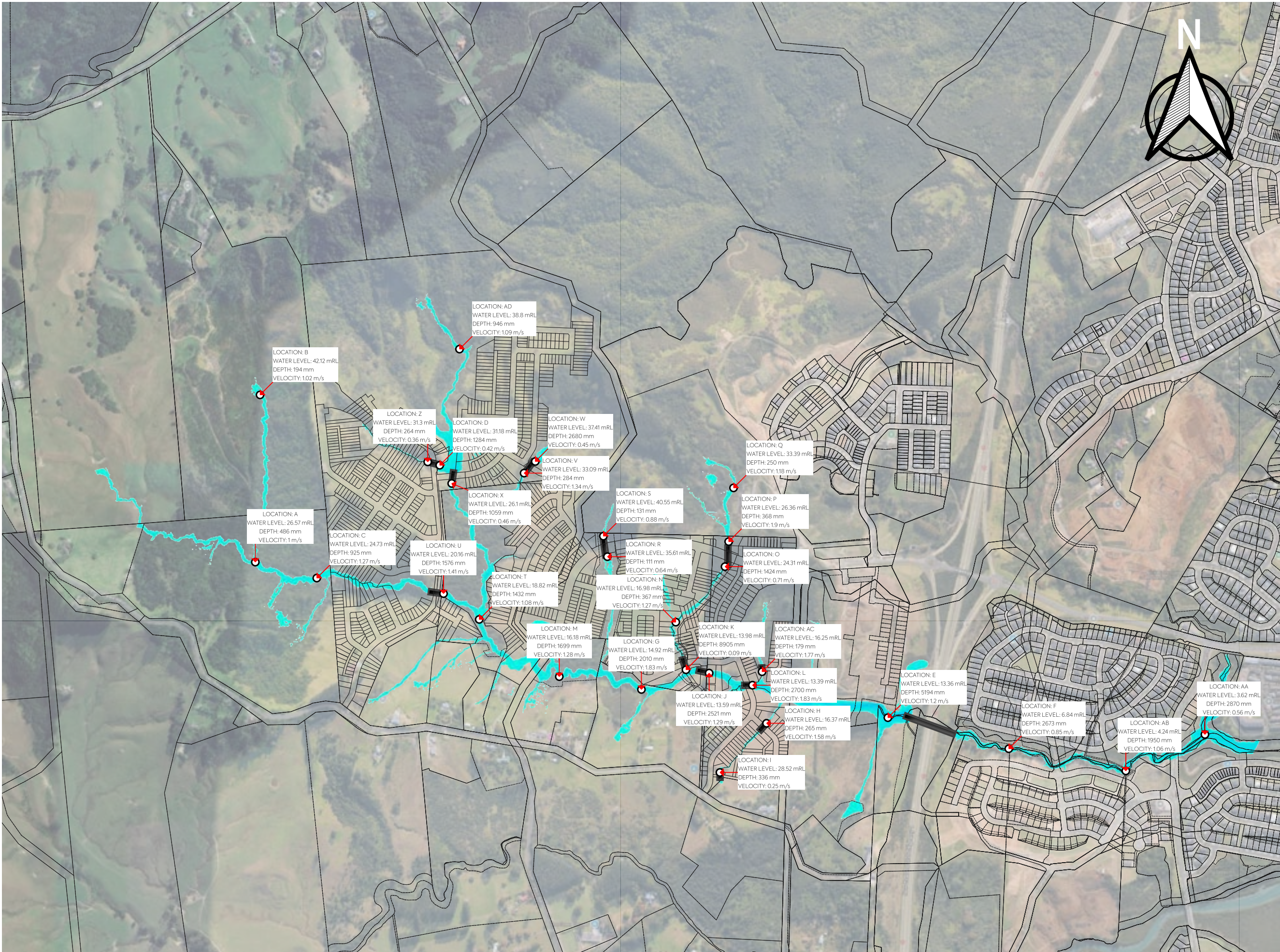
VINEWAY LIMITED

DELMORE
53A, 53B & 55 RUSSELL ROAD
OREWA

STORMWATER
FLOOD ASSESSMENT
50% AEP POST VS PRE DEVELOPMENT
COMPARISON PLAN (3.8D CC)

WWW.MCKENZIEANDCO.CO.NZ

THIS DRAWING IS SOLELY FOR USE BY THE CLIENT ON THIS PROJECT ONLY. NO LIABILITY IS ACCEPTED IN ITS USE BY ANY OTHER ENTITY OR FOR ANY OTHER PURPOSE.



- NOTES:
1. SCENARIO ID IS D_MPD21CC020AEPWABASE_PDT ,SCENARIO NUMBER 17.
 2. 20% AEP SCENARIO, WITH 2.1 DEGREE CLIMATE CHANGE. LAND USE IS MAXIMUM PROBABLE DEVELOPMENT WITHIN THE DELMORE SITE, EXISTING OUTSIDE THE DEVELOPMENT SITE.
 3. CONTOUR INTERVAL IS 2.5m

LEGEND:

— CROSS SECTION

Proposed Culverts

CONTOURS

— 2.5 (MINOR)

— 10 (MAJOR)

FLOOD DEPTH (SCENARIO 9)

Band 1 (Gray)

	<= 0.8000
	0.8000 - 1.6000
	1.6000 - 2.4000
	2.4000 - 3.2000
	3.2000 - 4.0000
	4.0000 - 4.8000
	4.8000 - 5.6000
	5.6000 - 6.4000
	6.4000 - 7.2000
	7.2000 - 8.0000
	8.0000 - 8.8000
	8.8000 - 9.6000
	9.6000 - 10.4000
	10.4000 - 11.2000
	11.2000 - 12.0000
	12.0000 - 12.8000
	12.8000 - 13.6000
	13.6000 - 14.4000
	14.4000 - 15.2000
	> 15.2000

MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

PURPOSE OF ISSUE:
FOR DISCUSSION ONLY

SCALE:
1:10,000

DRAWING NO: 3725-0-4509
REV: B

REV	DESCRIPTION	DRN	BYCHK	BY APP	BY DATE
B	MODELLING UPDATE	HS	-	-	21/07/25
A	FIRST ISSUE	HS	-	-	16/01/2025

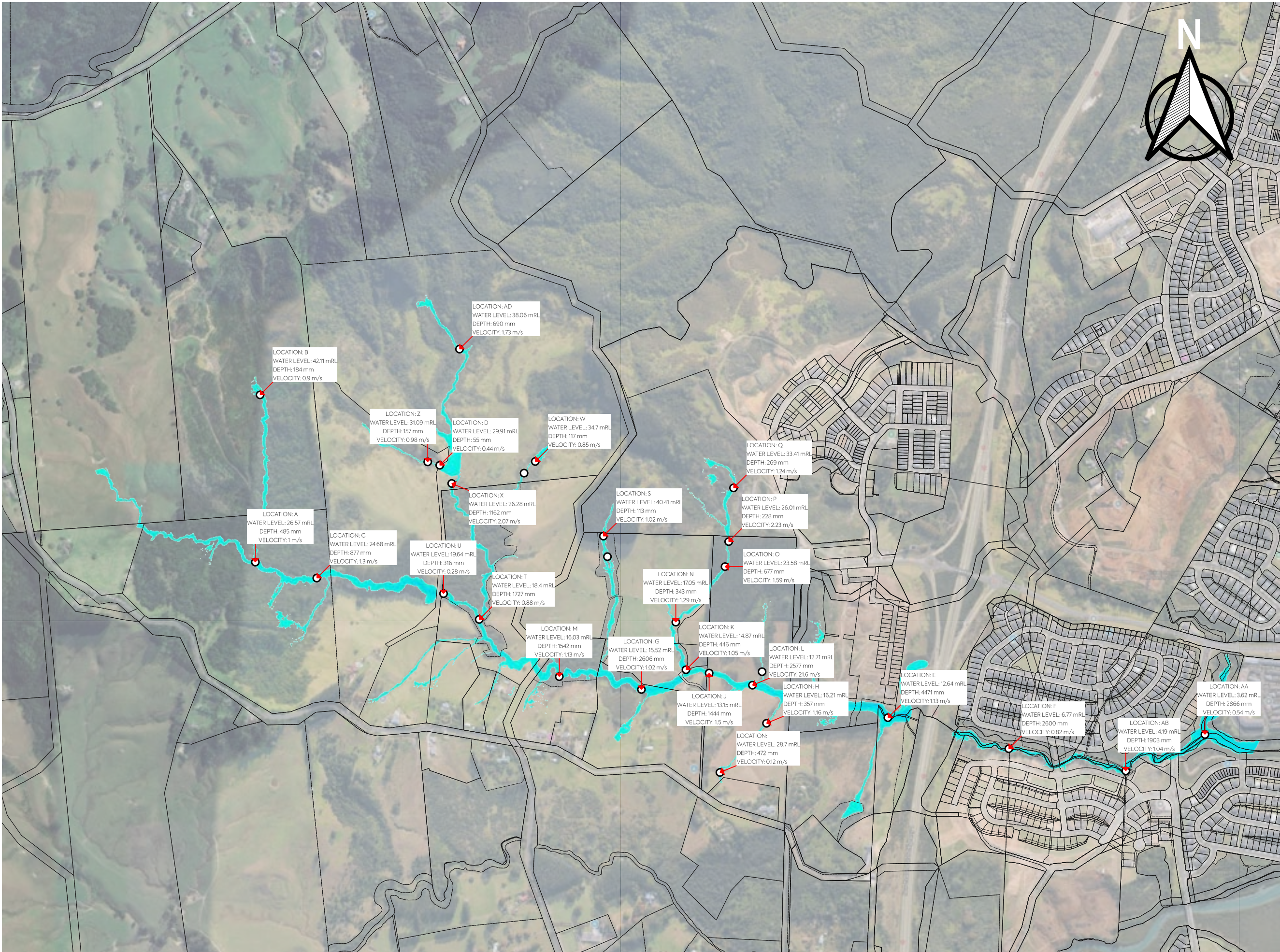
PLOT DATE ----



VINEWAY LIMITED

DELMORE
53A, 53B & 55 RUSSELL ROAD
OREWA

STORMWATER
FLOOD ASSESSMENT
20% AEP POST-DEVELOPMENT
FLOOD PLAIN PLAN (2.1D CC)



- NOTES:
1. SCENARIO ID IS EXD21CC020AEPWABASE_EXT ,SCENARIO NUMBER 15.
 2. 20% AEP SCENARIO, WITH 2.1 DEGREE CLIMATE CHANGE, LAND USE IS CURRENT (PRE-EXISTING).
 3. CONTOUR INTERVAL IS 2.5m

LEGEND:

CROSS SECTION

CONTOURS

2.5 (MINOR)

10 (MAJOR)

FLOOD DEPTH (SCENARIO 9)

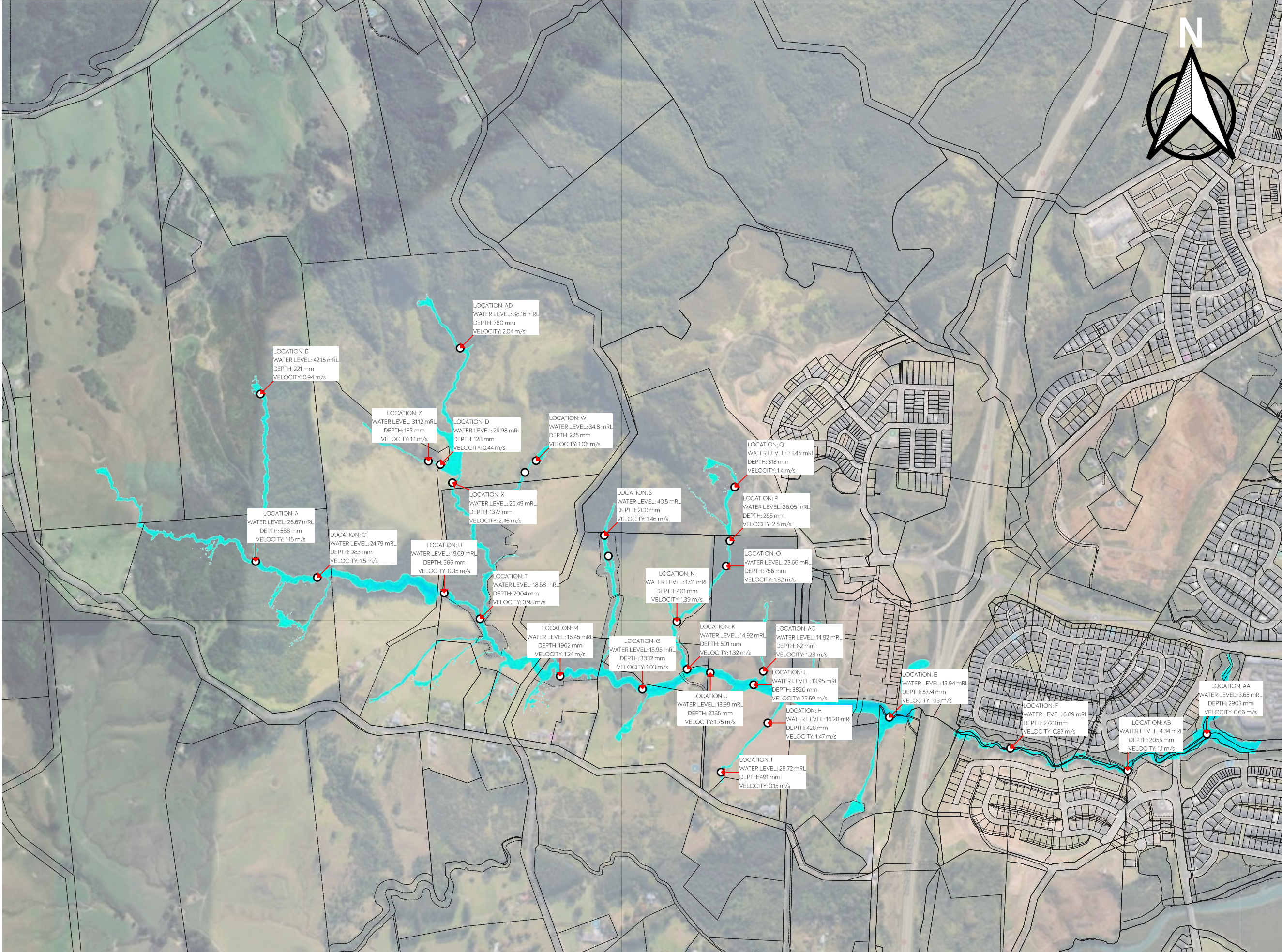
Band 1 (Gray)

	<= 0.8000
	0.8000 - 1.6000
	1.6000 - 2.4000
	2.4000 - 3.2000
	3.2000 - 4.0000
	4.0000 - 4.8000
	4.8000 - 5.6000
	5.6000 - 6.4000
	6.4000 - 7.2000
	7.2000 - 8.0000
	8.0000 - 8.8000
	8.8000 - 9.6000
	9.6000 - 10.4000
	10.4000 - 11.2000
	11.2000 - 12.0000
	12.0000 - 12.8000
	12.8000 - 13.6000
	13.6000 - 14.4000
	14.4000 - 15.2000
	> 15.2000

MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

					CLIENT:	PROJECT:	TITLE:	PURPOSE OF ISSUE:
						DELMORE	STORMWATER	FOR CONSENT
					VINEWAY LIMITED	53A, 53B & 55 RUSSELL ROAD	FLOOD ASSESSMENT	
						OREWA	20% AEP PRE-DEVELOPMENT	
							FLOOD PLAIN PLAN (2.1D CC)	
								SCALE:
								1:10,000
								DRAWING NO:
								3725-0-4510
								REV:
								B





- NOTES:
1. SCENARIO ID IS EXD21CC010AEPWABASE_EXT ,SCENARIO NUMBER 14.
 2. 10% AEP SCENARIO, WITH 2.1 DEGREE CLIMATE CHANGE, LAND USE IS CURRENT (PRE-EXISTING).
 3. CONTOUR INTERVAL IS 2.5m

LEGEND:

CROSS SECTION

CONTOURS

- 2.5 (MINOR)
- 10 (MAJOR)

FLOOD DEPTH (SCENARIO 9)

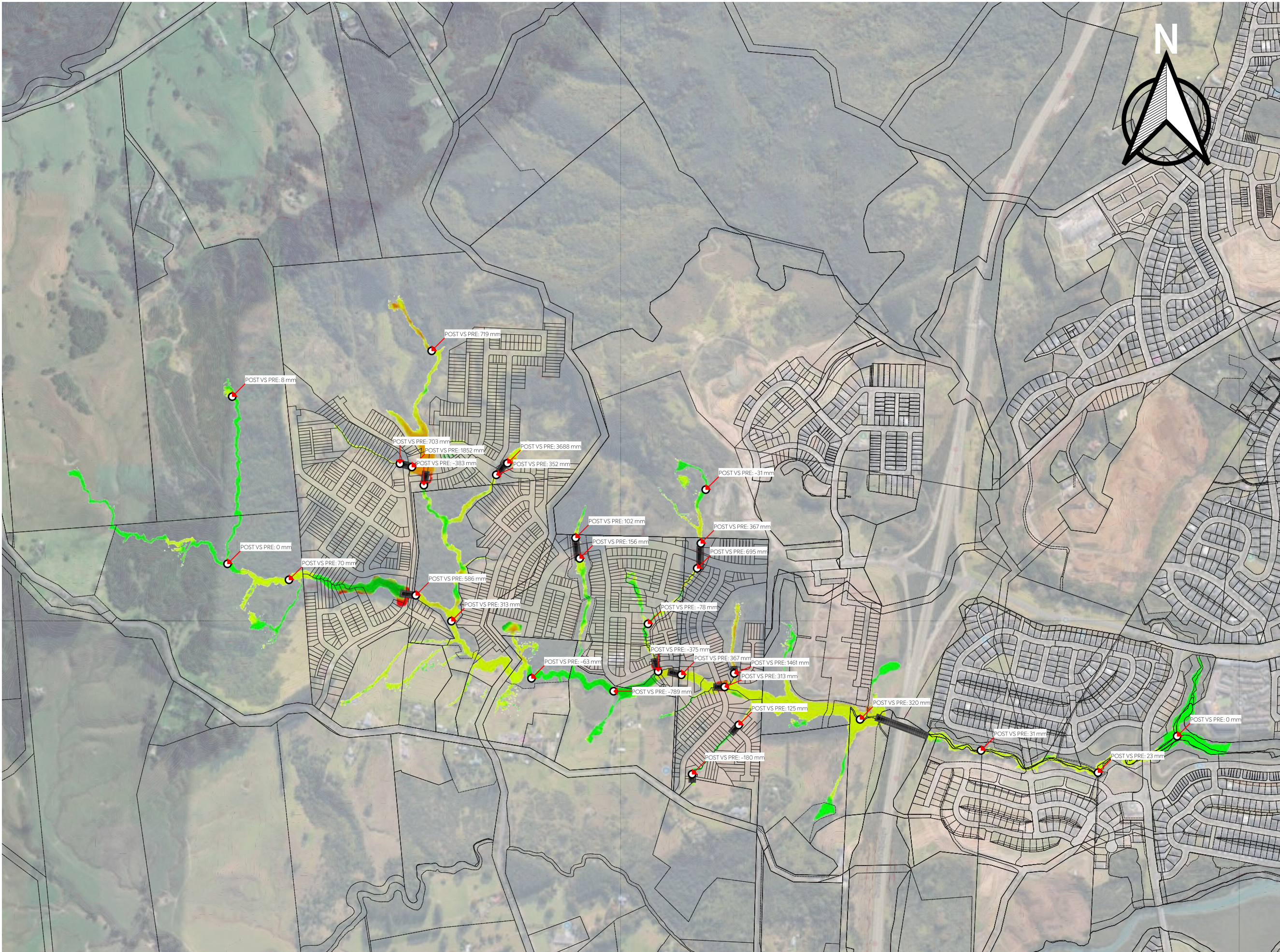
Band 1 (Gray)

<= 0.8000
0.8000 - 1.6000
1.6000 - 2.4000
2.4000 - 3.2000
3.2000 - 4.0000
4.0000 - 4.8000
4.8000 - 5.6000
5.6000 - 6.4000
6.4000 - 7.2000
7.2000 - 8.0000
8.0000 - 8.8000
8.8000 - 9.6000
9.6000 - 10.4000
10.4000 - 11.2000
11.2000 - 12.0000
12.0000 - 12.8000
12.8000 - 13.6000
13.6000 - 14.4000
14.4000 - 15.2000
> 15.2000

MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

CLIENT:					PROJECT:					TITLE:					PURPOSE OF ISSUE:				
VINEWAY LIMITED					DELMORE					STORMWATER FLOOD ASSESSMENT					FOR CONSENT				
53A, 53B & 55 RUSSELL ROAD					OREWA					10% AEP PRE-DEVELOPMENT FLOOD PLAIN PLAN (2.1D CC)					SCALE:				
															DRAWING NO:				
															3725-0-4513				
															REV:				
															B				





NOTES:

1. COMPARISON IS FOR 10% AEP STORM EVENT FOR PRE- AND POST- DEVELOPMENT SCENARIO.

2. SCENARIOS FOR COMPARISON IS SCENARIO 18 (D_MPD21CC010AEPWBBASE_PDT) AND SCENARIO 14 (EXD21CC010AEPWBBASE_EXT)



MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

PURPOSE OF ISSUE:
FOR CONSENT

SCALE:
1:10,000

DRAWING NO:
3725-0-4514

REV:
B

REV	DESCRIPTION	DRN	BYCHK	BY APP	BY DATE
B	MODELLING UPDATE	HS	-	-	21/07/2025
A	FIRST ISSUE	HS	-	-	16/01/2025



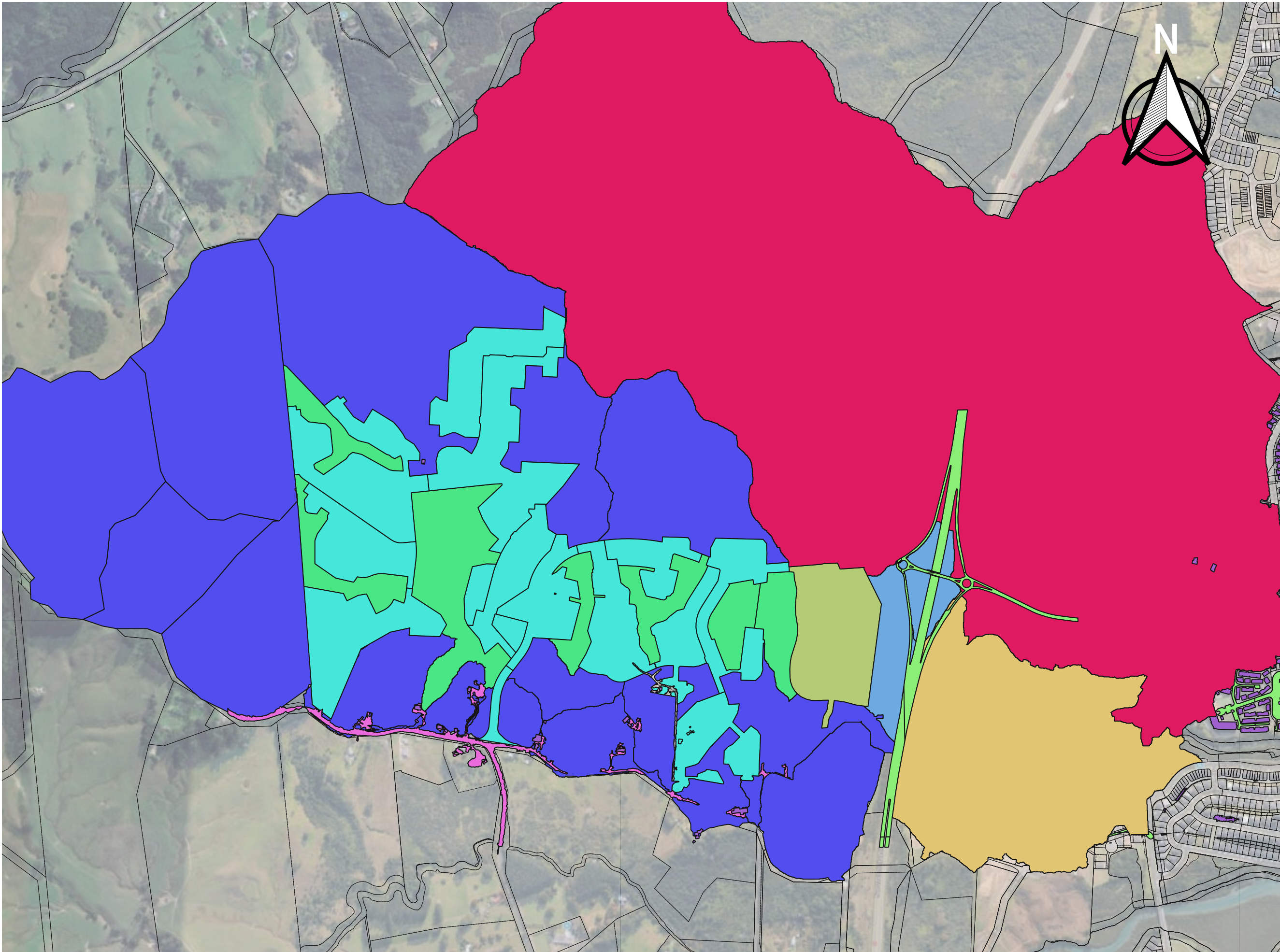
MCKENZIE & CO.

VINEWAY LIMITED

DELMORE

53A, 53B & 55 RUSSELL ROAD
OREWA

STORMWATER
FLOOD ASSESSMENT
10% AEP POST VS PRE DEVELOPMENT
COMPARISON PLAN (3.8D CC)



NOTES:
1. LAND COVER DATA FOR POST-DEVELOPMENT SCENARIO

LAND TYPE	MANNINGS
Building	0.5
Delmore Development	0.1
Road	0.02
ROADS	0.02
Other Impervious	0.035
EXTERNAL DEVELOPMENT	0.1
INTERNAL STREAMS	0.06
External Undeveloped	0.06
DOWNSTREAM COMP	0.1
GRAND DRIVE	0.1

LEGEND

- BUILDING
- DELMORE DEVELOPMENT
- URBAN (DOWNSTREAM)
- EXTERNAL DEVELOPMENT
- EXTERNAL UNDEVELOPED
- GRAND DRIVE
- INTERNAL STREAMS
- OTHER IMPERVIOUS
- ROAD
- ROADS

MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

PURPOSE OF ISSUE:
FOR CONSENT

SCALE:
1:10,000

DRAWING NO: 3725-0-4515
REV: B

REV	DESCRIPTION	DRN	BYCHK	BY APP	BY DATE
B	MODELLING UPDATE	HS	-	-	21/07/25
A	FIRST ISSUE	HS	-	-	16/01/2025



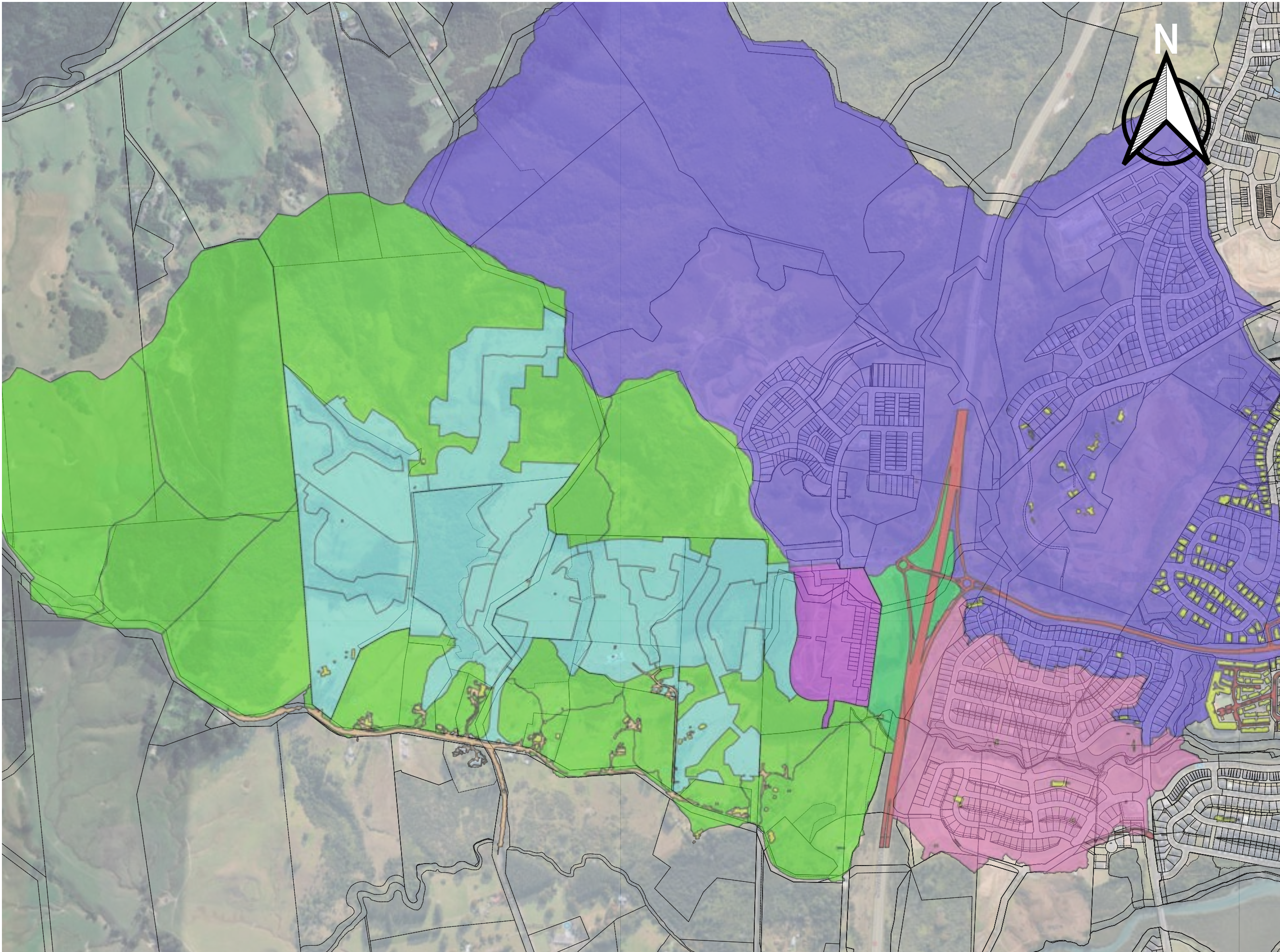
MCKENZIE & CO.

VINEWAY LIMITED

DELMORE

53A, 53B & 55 RUSSELL ROAD
OREWA

STORMWATER
FLOOD ASSESSMENT
POST-DEVELOPMENT
MANNINGS EXTENT



NOTES:
1. LAND COVER DATA FOR POST-DEVELOPMENT SCENARIO

layer	Mannings
INTERNAL STREAMS	0.06
External Undeveloped	0.06
DOWNSTREAM COMP	0.1
GRAND DRIVE	0.1
ROADS	0.02
EXTERNAL DEVELOPMENT	0.1
Building	0.5
Road	0.02
Other Impervious	0.035

- LEGEND
- BUILDING
 - URBAN (DOWNSTREAM)
 - EXTERNAL DEVELOPMENT
 - EXTERNAL UNDEVELOPED
 - GRAND DRIVE
 - INTERNAL STREAMS
 - OTHER IMPERVIOUS
 - ROAD
 - ROADS
 -

MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

PURPOSE OF ISSUE:
FOR CONSENT

SCALE:
1:10,000

DRAWING NO: 3725-0-4516
REV: B

REV	DESCRIPTION	DRN	BYCHK	BY APP	BY DATE
B	MODELLING UPDATE	HS	-	-	27/01/25
A	FIRST ISSUE	HS	-	-	16/01/2025

PLOT DATE ----

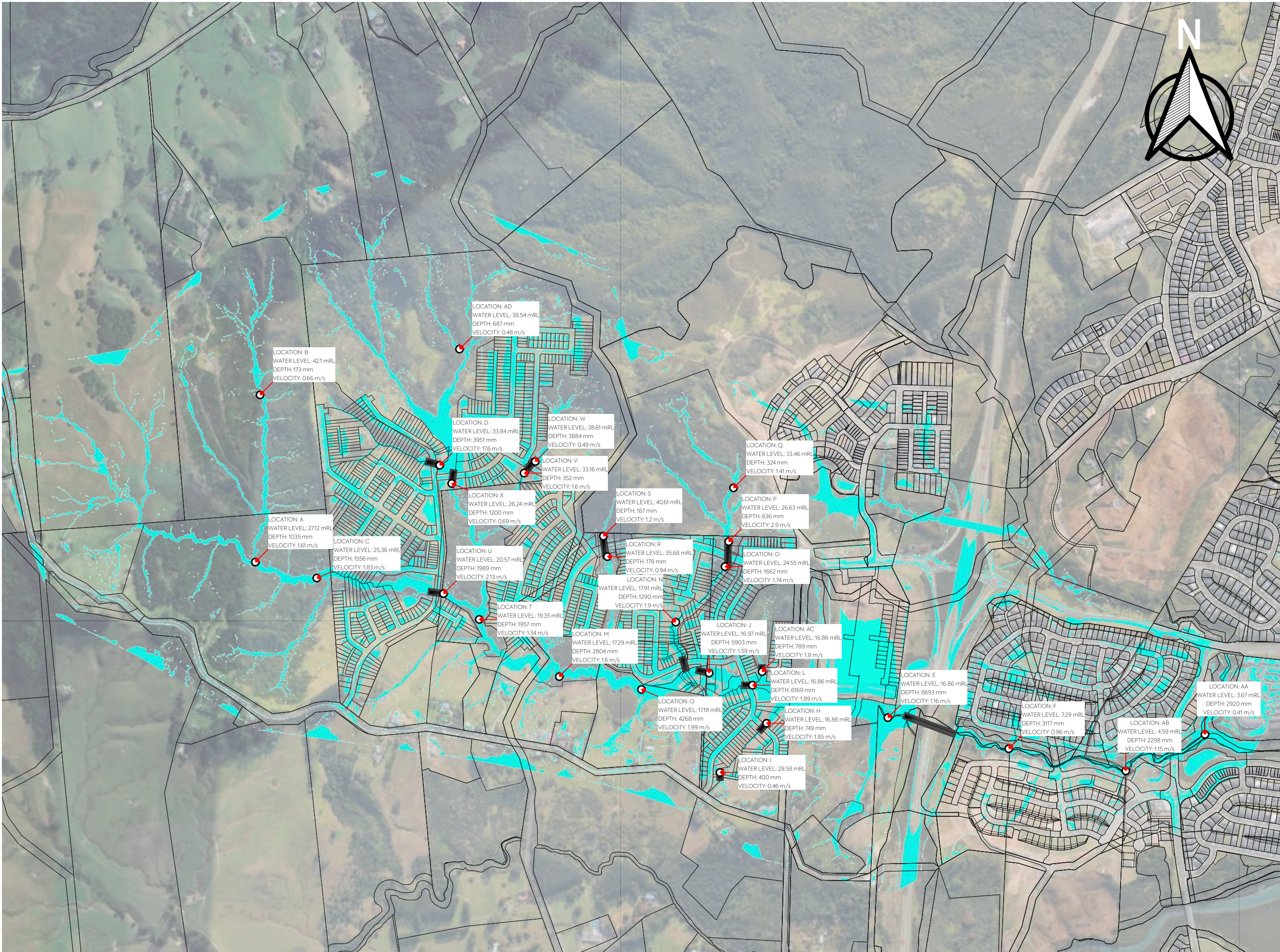


MCKENZIE & CO.

VINEWAY LIMITED

DELMORE
53A, 53B & 55 RUSSELL ROAD
OREWA

STORMWATER
FLOOD ASSESSMENT
PRE-DEVELOPMENT
MANNINGS EXTENT



- NOTES:
1. SCENARIO ID IS D_MPD38CC001AEPWBBASE_PDT, USING RAIN ON GRID METHODOLOGY
 2. 1% AEP SCENARIO, WITH 3.8 DEGREE CLIMATE CHANGE, LAND USE IS MAXIMUM PROBABLE DEVELOPMENT WITHIN THE DELMORE SITE, EXISTING OUTSIDE THE DEVELOPMENT SITE.
 3. CONTOUR INTERVAL IS 2.5m

LEGEND:

— CROSS SECTION

Proposed Culverts

CONTOURS

— 2.5 (MINOR)

— 10 (MAJOR)

FLOOD DEPTH (SCENARIO 9)

Band 1 (Gray)

	≤ 0.8000
	0.8000 - 1.6000
	1.6000 - 2.4000
	2.4000 - 3.2000
	3.2000 - 4.0000
	4.0000 - 4.8000
	4.8000 - 5.6000
	5.6000 - 6.4000
	6.4000 - 7.2000
	7.2000 - 8.0000
	8.0000 - 8.8000
	8.8000 - 9.6000
	9.6000 - 10.4000
	10.4000 - 11.2000
	11.2000 - 12.0000
	12.0000 - 12.8000
	12.8000 - 13.6000
	13.6000 - 14.4000
	14.4000 - 15.2000
	> 15.2000

MAP PROJECTION/ VERTICAL DATUM:
NZGD2000 / MT EDEN 2000
(EPSG: 2105)
NEW ZEALAND VERTICAL DATUM 2016

CLIENT:				PROJECT:				TITLE:				PURPOSE OF ISSUE:			
VINEWAY LIMITED				DELMORE				STORMWATER				FOR CONSENT			
53A, 53B & 55 RUSSELL ROAD				RAIN ON GRID				1% AEP POST-DEVELOPMENT				SCALE:			
OREWA				FLOOD PLAIN PLAN (3.8D CC)				1:10,000				DRAWING NO:			
								3725-0-4518				REV:			
								A							

