

**OPUS**

Dudley Creek Flood Remediation

Downstream Options Report

Rev 2, 12/6/15

Appendix D

**DRAWING LIST**

DRAWING NO.	REV	DRAWING TITLE
3384543-CE-001	A	DOWNSTREAM OPTIONS PLAN
3384543-CE-002	A	OPTION A - A1 (GRAVITY) AND A2 (PUMPED)
3384543-CE-003	A	OPTION A1 LONG SECTION (GRAVITY) SHEET 1 OF 2
3384543-CE-004	A	OPTION A1 LONG SECTION (GRAVITY) SHEET 2 OF 2
3384543-CE-005	A	OPTION A2 LONG SECTION (PUMPED) SHEET 1 OF 2
3384543-CE-006	A	OPTION A2 LONG SECTION (PUMPED) SHEET 2 OF 2
3384543-CE-007	A	OPTION A NORTH PARADE CROSSING
3384543-CE-010	A	OPTION A BANKS AVENUE PLAN
3384543-CE-011	A	OPTION A BANKS AVENUE CROSS SECTIONS SHEET 1 OF 2
3384543-CE-012	A	OPTION A BANKS AVENUE CROSS SECTIONS SHEET 2 OF 2
3384543-CE-020	A	OPTION B - B1, B3 (GRAVITY) AND B2, B4 (PUMPED)
3384543-CE-021	A	OPTION B1 LONG SECTION (GRAVITY) SHEET 1 OF 2
3384543-CE-022	A	OPTION B1 LONG SECTION (GRAVITY) SHEET 2 OF 2
3384543-CE-023	A	OPTION B2 LONG SECTION (PUMPED) SHEET 1 OF 2
3384543-CE-024	A	OPTION B2 LONG SECTION (PUMPED) SHEET 2 OF 2

3384543-CE-026	A	OPTION B - DUDLEY CREEK CROSSING PLAN
3384543-CE-031	A	OPTION B3 LONG SECTION (GRAVITY) SHEET 1 OF 3
3384543-CE-032	A	OPTION B3 LONG SECTION (GRAVITY) SHEET 2 OF 3
3384543-CE-033	A	OPTION B3 LONG SECTION (GRAVITY) SHEET 3 OF 3
3384543-CE-034	A	OPTION B4 LONG SECTION (PUMPED) SHEET 1 OF 3
3384543-CE-035	A	OPTION B4 LONG SECTION (PUMPED) SHEET 2 OF 3
3384543-CE-036	A	OPTION B4 LONG SECTION (PUMPED) SHEET 3 OF 3
3384543-CE-040	A	OPTION C - C1 (GRAVITY) AND C2 (PUMPED)
3384543-CE-041	A	OPTION C1 LONG SECTION (GRAVITY) SHEET 1 OF 2
3384543-CE-042	A	OPTION C1 LONG SECTION (GRAVITY) SHEET 2 OF 2
3384543-CE-045	A	OPTION C2 LONG SECTION (PUMPED) SHEET 1 OF 2
3384543-CE-046	A	OPTION C2 LONG SECTION (PUMPED) SHEET 2 OF 2
3384543-CE-050	A	OPTION C STAPLETONS ROAD PLAN
3384543-CE-051	A	OPTION C STAPLETONS ROAD CROSS SECTIONS SHEET 1 OF 2
3384543-CE-052	A	OPTION C STAPLETONS ROAD CROSS SECTIONS SHEET 2 OF 2
3384543-CE-060	A	PIPE AND BOX CULVERT DETAILS

■ CIVIL

BECA REF: 3384543

OPUS REF: 3C1262.00

**DUDLEY CREEK  
FLOOD REMEDIATION**

**DOWNSTREAM OPTIONS  
CONCEPT DESIGN  
DRAWINGS**

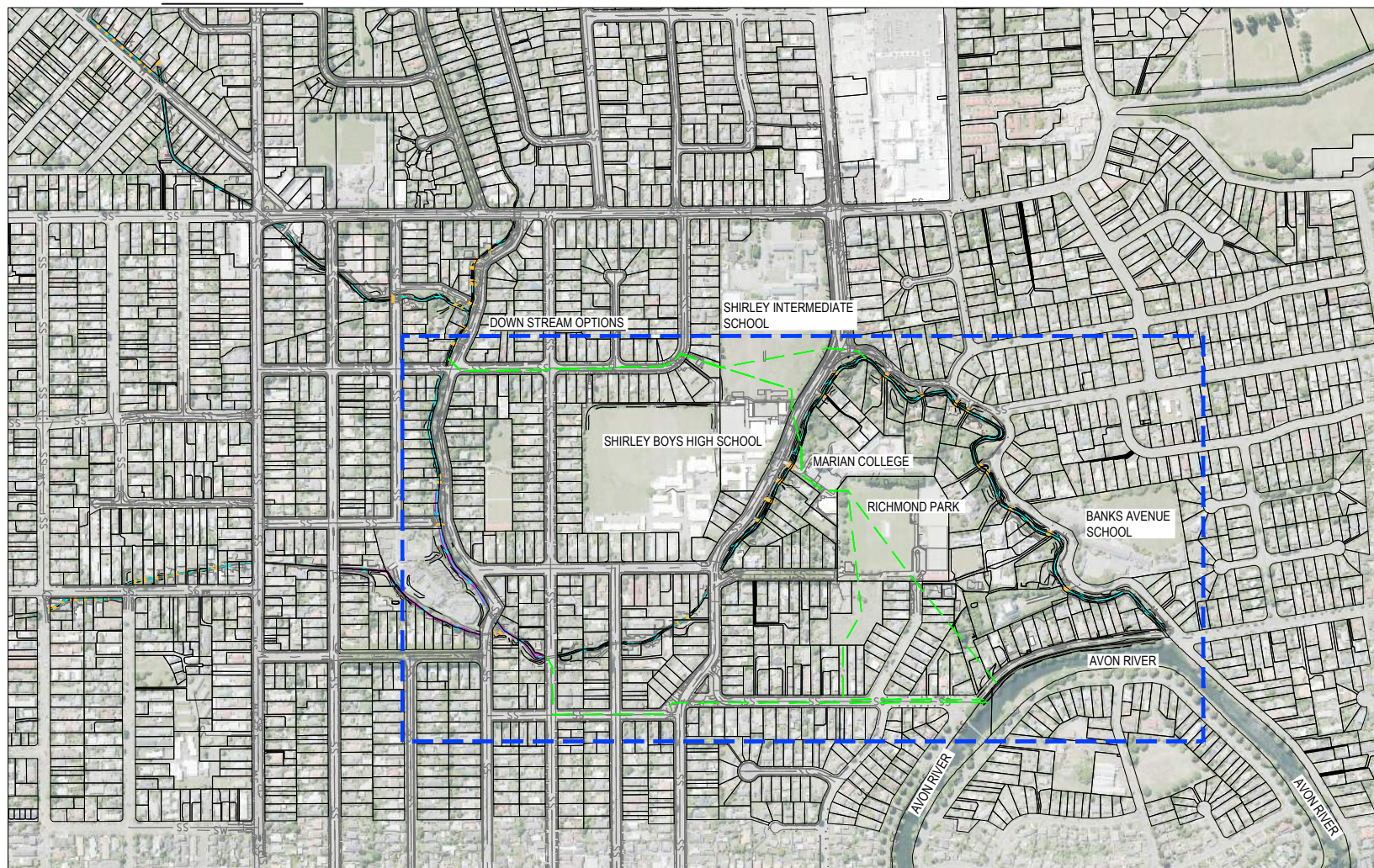
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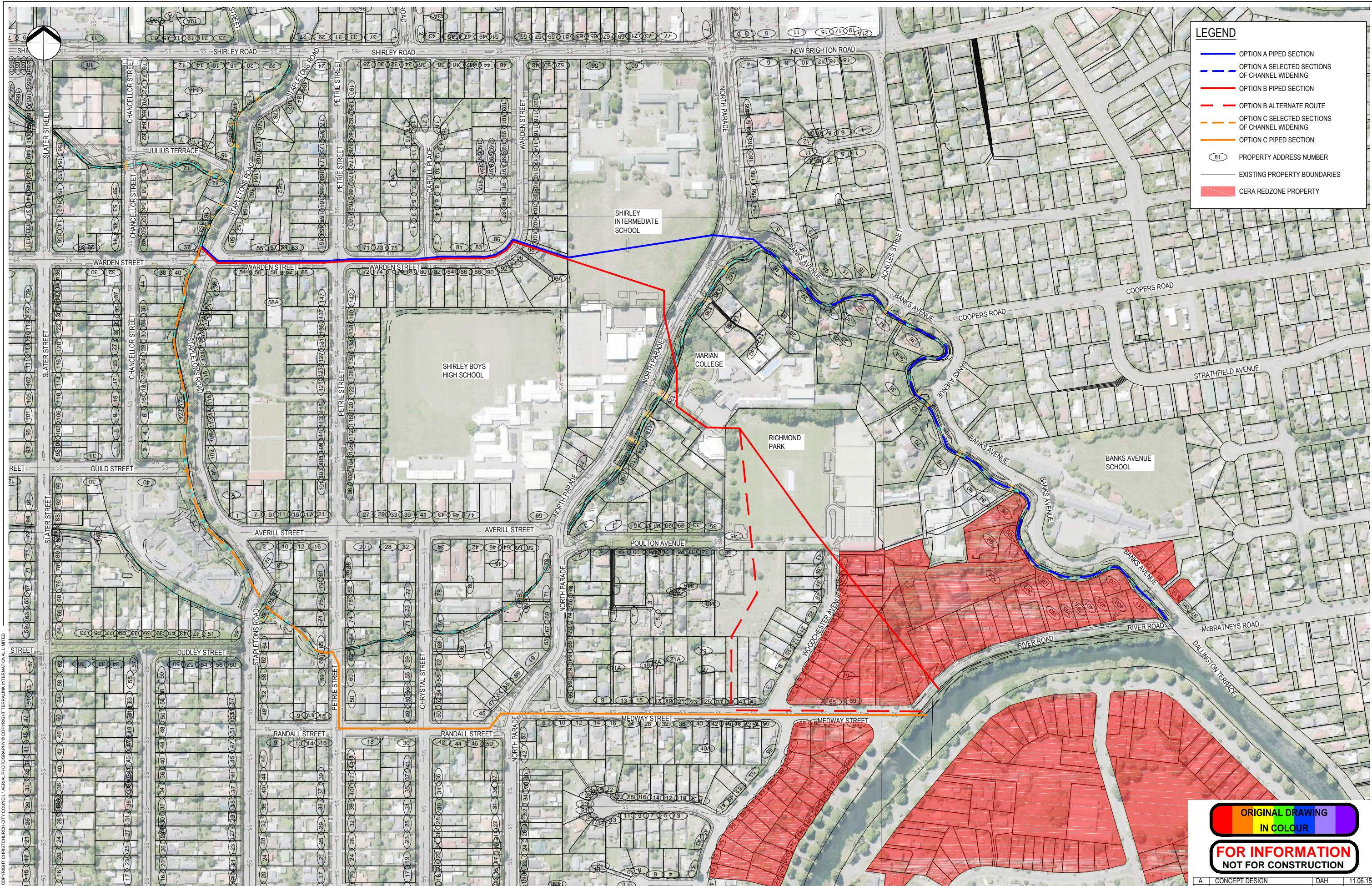
CAPITAL PROGRAMME GROUP

By  
Beca and Opus

LOCALITY PLAN







**LEGEND**

- OPTION A PIPED SECTION
- - - OPTION A SELECTED SECTIONS OF CHANNEL WIDENING
- OPTION B PIPED SECTION
- - - OPTION B ALTERNATE ROUTE
- OPTION C SELECTED SECTIONS OF CHANNEL WIDENING
- OPTION C PIPED SECTION
- ⊙ 81 PROPERTY ADDRESS NUMBER
- EXISTING PROPERTY BOUNDARIES
- CERA REDZONE PROPERTY

ORIGINAL DRAWING  
IN COLOUR  
FOR INFORMATION  
NOT FOR CONSTRUCTION

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

**Christchurch City Council**  
 CAPITAL PROGRAMME GROUP

DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE
RL		DES. REVIEW	DJG	DJG	06.2015
SURVEY		DRAWN	DAH	DAH	06.2015
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			PRINTED ON 11-Jun-15 BY DLM1		

APPROVED		FOR TENDER	
DATE	SIGNED	DATE	SIGNED
FOR CONSTRUCTION		CONSULTANT	
DATE	SIGNED	CONSULTANT PROJECT REF.	CONSULTANT FILE REF.
		3384543 / 3C1262.00	S:\300 Drawings\CAD

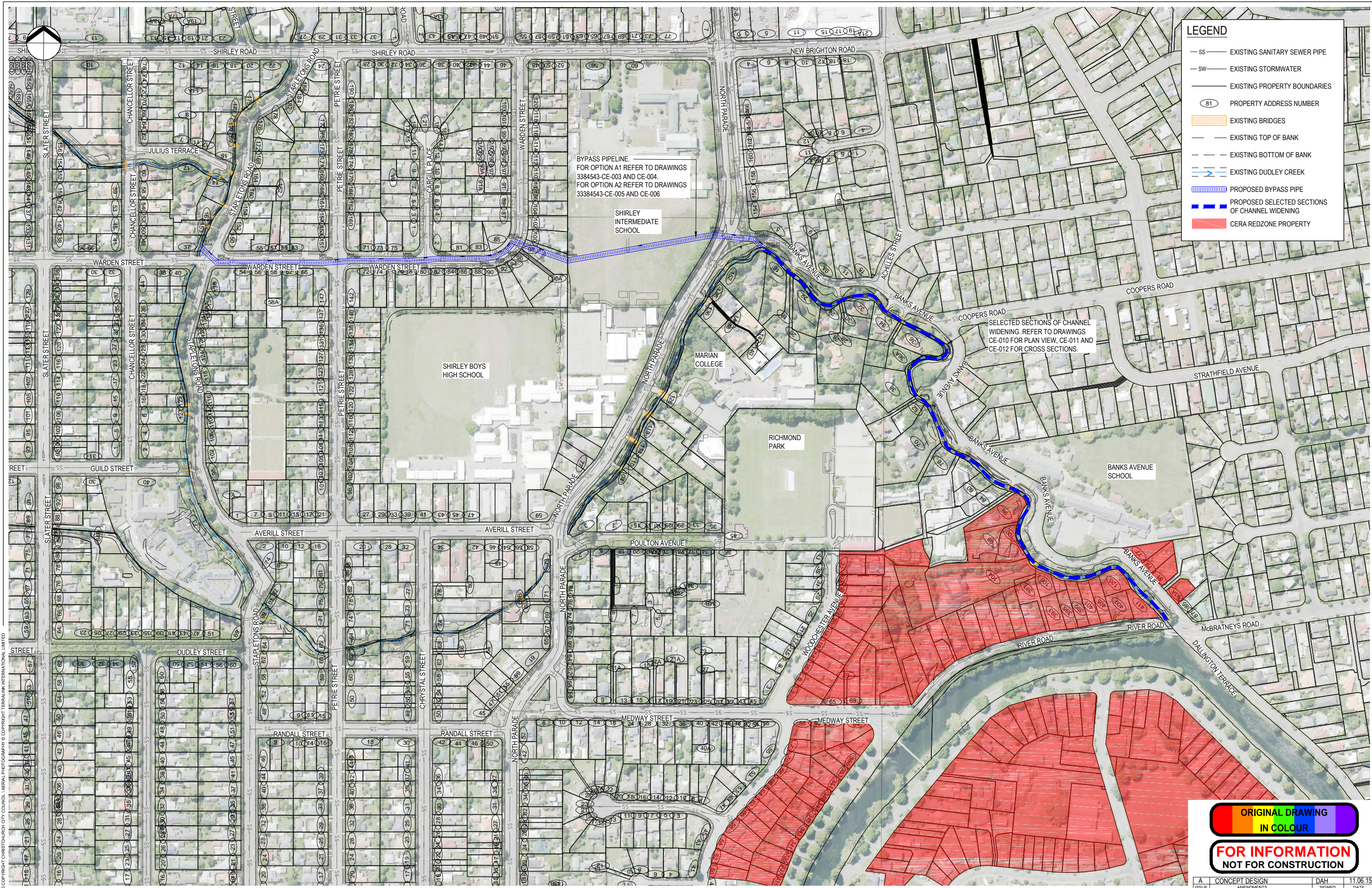
**Christchurch City Council** | **Beca** | **OPUS**

**DUDLEY CREEK FLOOD REMEDIATION**

**DOWNSTREAM OPTIONS PLAN**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:2000 @ A1
CAD DRAWING FILE REF.	3384543-CE-001	CPG PROJECT FILE NUMBER	CP502630	SHEET	1 OF 1





**LEGEND**

- SS — EXISTING SANITARY SEWER PIPE
- SW — EXISTING STORMWATER
- — EXISTING PROPERTY BOUNDARIES
- ⊙ 81 ⊙ PROPERTY ADDRESS NUMBER
- — EXISTING BRIDGES
- — EXISTING TOP OF BANK
- — EXISTING BOTTOM OF BANK
- — EXISTING DUDLEY CREEK
- ▬▬▬▬▬▬ PROPOSED BYPASS PIPE
- ▬▬▬▬▬▬ PROPOSED SELECTED SECTIONS OF CHANNEL WIDENING
- CERA REDZONE PROPERTY

BYPASS PIPELINE.  
FOR OPTION A1 REFER TO DRAWINGS  
3384543-CE-003 AND CE-004.  
FOR OPTION A2 REFER TO DRAWINGS  
33384543-CE-005 AND CE-006

SELECTED SECTIONS OF CHANNEL  
WIDENING. REFER TO DRAWINGS  
CE-010 FOR PLAN VIEW, CE-011 AND  
CE-012 FOR CROSS SECTIONS.

ORIGINAL DRAWING  
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**Christchurch City Council**  
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DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE
		DESIGNED	DJG	DJG	06.2015
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FOR TENDER	SIGNED
DATE	SIGNED
FOR CONSTRUCTION	
DATE	SIGNED

CONSULTANT	<b>Beca</b>	<b>OPUS</b>
CONSULTANT PROJECT REF.	3384543 / 3C1262.00	
CONSULTANT FILE REF.	S:\300 Drawings\CAD	

PROJECT TITLE  
**DUDLEY CREEK FLOOD REMEDIATION**

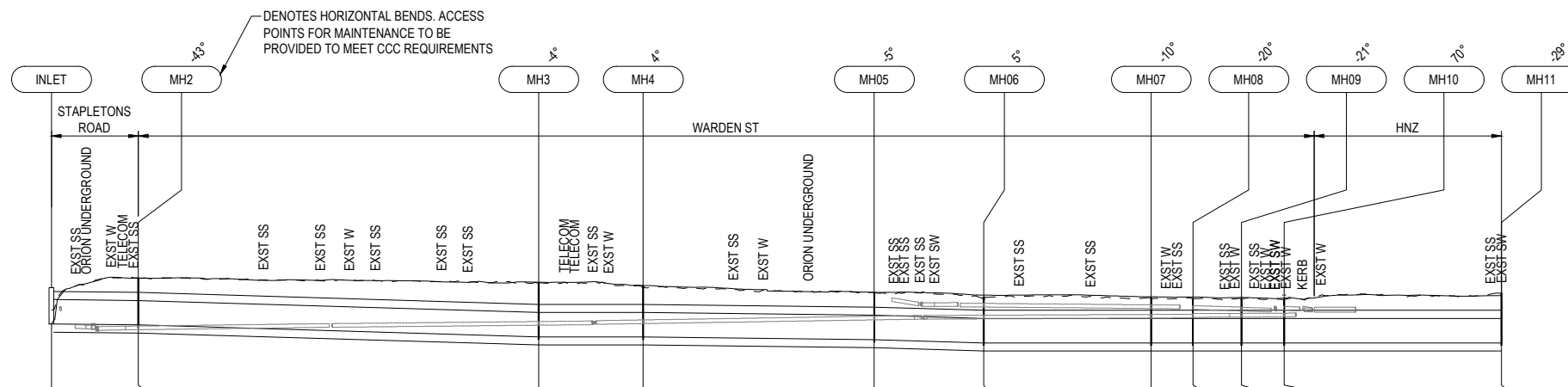
DRAWING TITLE  
**OPTION A - A1 (GRAVITY)  
AND A2 (PUMPED)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:2000 @ A1
CAD DRAWING FILE REF.	3384543-CE-002	CPG PROJECT FILE NUMBER	CP502630	SHEET	1 OF 1

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

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**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- PROPOSED BYPASS PIPE

**NOTES**

- PIPE TYPE REFERS TO A 3.0m WIDE x 1.5m HIGH BOX CULVERT AS PER DETAIL A ON DRAWING 3384543-CE-050.

	INLET		MH2		MH3		MH4		MH5		MH6		MH7		MH8		MH9		MH10		MH11	
DATUM RL. (m)	4.0																					
LID LEVEL	13.00	13.60	13.28	13.07	12.69	12.40	12.35	12.32	12.32	12.27	12.66											
INVERT LEVEL	10.76	10.71	9.97	9.97	9.80	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60
DEPTH TO INVERT	2.24	2.89	3.32	3.10	2.89	2.80	2.75	2.72	2.72	2.72	2.67	3.06										
PIPE SIZE	3000x1500mm		3000x1500mm		3000x1500mm		3000x1500mm		3000x1500mm		3000x1500mm		3000x1500mm		3000x1500mm		3000x1500mm		3000x1500mm		3000x1500mm	
GRADE	0.2%		0.6%		-0.01%		0.24%		0.59%		-0.01%		-0.01%		-0.01%		-0.01%		-0.01%		-0.01%	
CHAINAGE	0.0	26.72m	26.7	123.09m	149.8	32.13m	181.9	71.02m	252.9	33.65m	286.6	51.49m	338.1	12.84m	350.9	14.93m	365.9	13.10m	379.0	66.84m	445.8	

SW LINE OPTION A1

ORIGINAL DRAWING  
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A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

DATUM	NAME	SIGNED	DATE
BENCH MK.	DESIGNED	DJG	06.2015
RL	DES. REVIEW	DAH	06.2015
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SURVEY LB	DRW. CHECK	DJG	06.2015
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SAP WBS	PRINTED ON 11-Jun-15 BY DLM1		

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CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

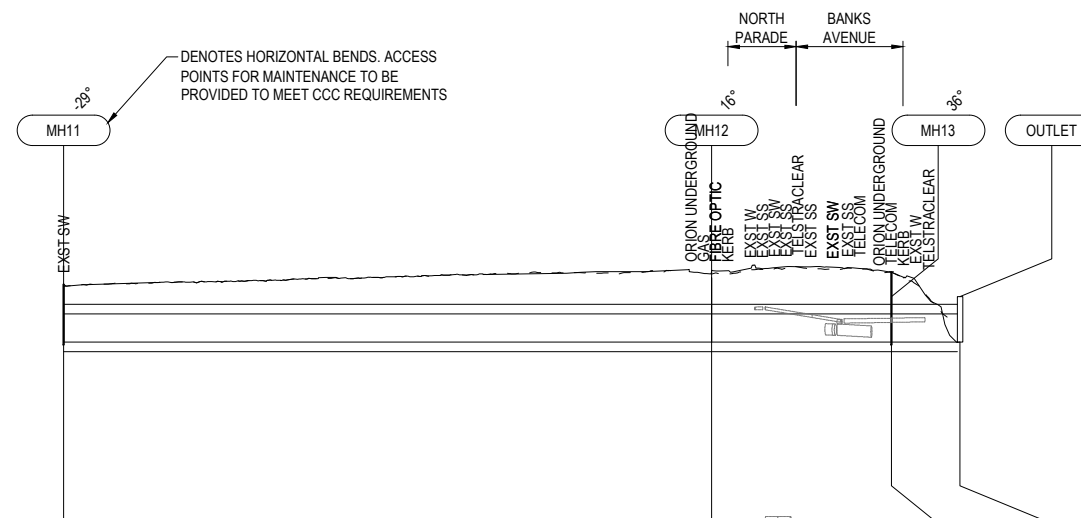
**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE

**OPTION A1 LONG SECTION  
(GRAVITY)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-003	COPY PROJECT FILE NUMBER	CP502630	SHEET	1 OF 2





DATUM R.L. (m)	-1.0					
LID LEVEL	12.86		13.00		13.31	12.00
INVERT LEVEL	9.60	9.60	9.60	9.60	9.60	9.60
DEPTH TO INVERT	3.06		3.40		3.71	2.40
PIPE SIZE	3000x1500mm		3000x1500mm		3000x1500mm	
GRADE	-0.01%		-0.01%		-0.01%	
CHAINAGE	445.8	171.42m	617.2	47.62m	664.8	18.13m

SW LINE OPTION A1

**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- PROPOSED BYPASS PIPE

- NOTES**
- PIPE TYPE REFERS TO A 3.0m WIDE x 1.5m HIGH BOX CULVERT AS PER DETAIL A ON DRAWING 3384543-CE-050.

ORIGINAL DRAWING  
IN COLOUR  
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A	CONCEPT DESIGN	DAH	11.06.15
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CAPITAL PROGRAMME GROUP

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BENCH MK.	DESIGNED	DJG	06.2015
RL	DES. REVIEW	DAH	06.2015
SURVEY	DRAWN	DLM	06.2015
SURVEY LB	DRW. CHECK	DJG	06.2015
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SAP WBS	PRINTED ON 11-Jun-15 BY DLM1		

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DATE	SIGNED

CONSULTANT

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CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

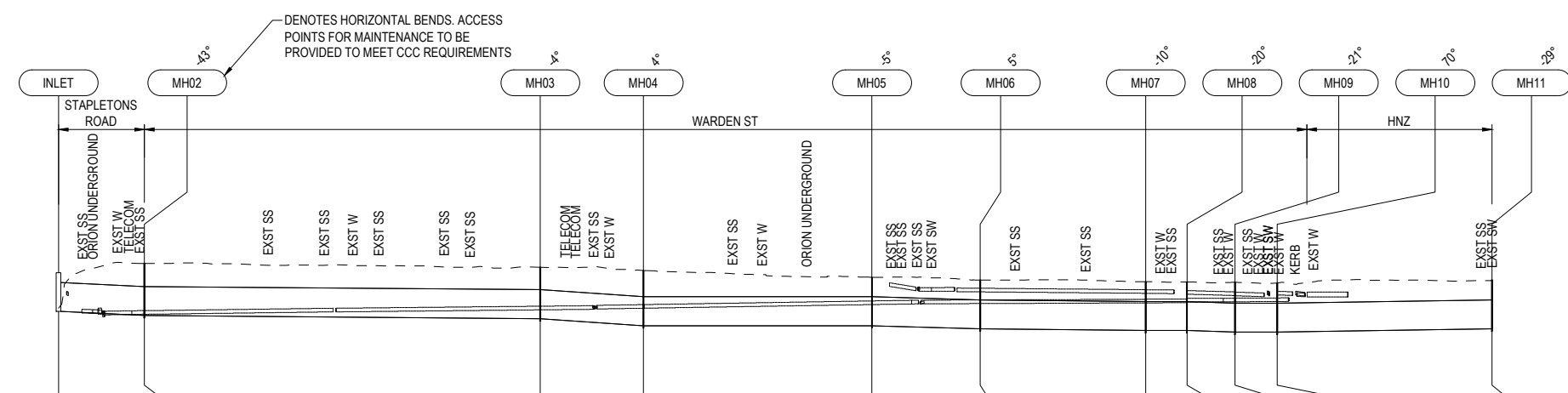
**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE

**OPTION A1 LONG SECTION (GRAVITY)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-004				
CPG PROJECT FILE NUMBER	CP502630	SHEET	2 OF 2		





**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- PROPOSED BYPASS PIPE

- NOTES**
- PIPE TYPE REFERS TO A DN1800 PE100 PN 6.3 AS PER DETAIL B ON DRAWING 3384543-CE-060.
  - PUMP STATION LOCATED IN WARDEN STREET.

	INLET		MH02		MH03		MH04		MH05		MH06		MH07		MH08		MH09		MH10		MH11	
DATUM RL. (m)	3.0																					
LID LEVEL	13.00		13.57		13.33		13.14		12.71		12.53		12.43		12.42		12.40		12.35		12.55	
INVERT LEVEL	10.59		10.33	10.33	10.14	10.14	9.70	9.70	9.70	9.70	9.50	9.50	9.40	9.40	9.40	9.40	9.30	9.30	9.30	9.30	9.50	
DEPTH TO INVERT	2.41		3.24		3.19	3.44	3.01	3.03	3.03	3.03	3.02	3.02	3.10	3.10	3.05	3.05	3.05	3.05	3.05	3.05		
PIPE SIZE	1800mm																					
GRADE	0.97%		0.16%		1.36%		-0.01%		0.59%		0.19%		-0.01%		0.67%		-0.01%		-0.3%			
CHAINAGE	0.0	26.72m	26.7	123.09m	149.8	32.13m	181.9	71.02m	252.9	33.65m	286.6	51.49m	338.1	12.84m	350.9	14.93m	365.9	13.10m	379.0	66.84m	445.8	

SW LINE OPTION A2



A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE



DATUM	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	DJG	DJG		06.2015
RL	DAH	DAH		06.2015
SURVEY	DLM	DLM		06.2015
SURVEY LB	DJG	DJG		06.2015
FILE LOCATION	S:\300 Drawings\CAD\			
DRAIN. REF.	3384543-CE-005.dwg			
SAP WBS	PRINTED ON 11-Jun-15 BY DLM1			

APPROVED	FOR TENDER
DATE	SIGNED
APPROVED	FOR CONSTRUCTION
DATE	SIGNED

CONSULTANT	Beca	OPUS
CONSULTANT PROJECT REF.	3384543 / 3C1262.00	
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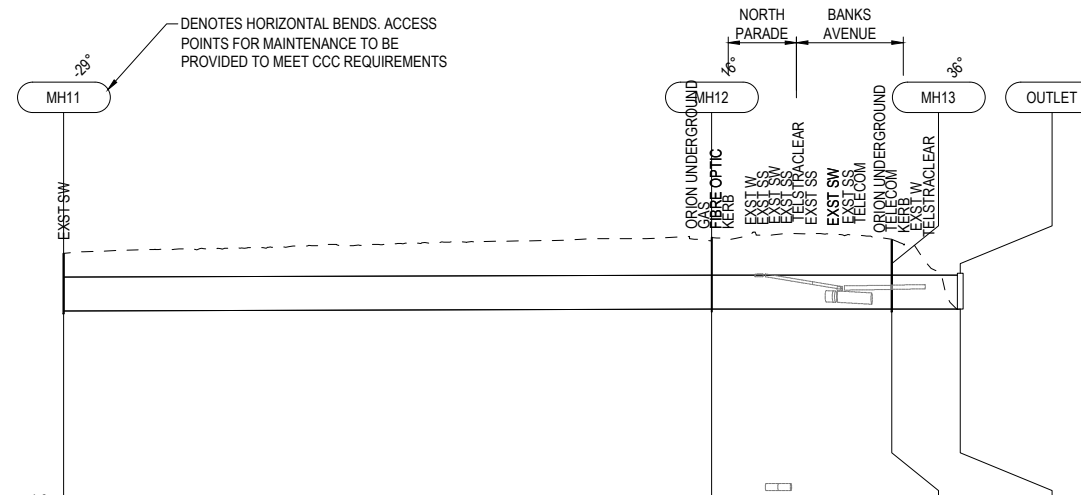
PROJECT TITLE  
**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE  
**OPTION A2 LONG SECTION (PUMPED)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-005	CAD PROJECT FILE NUMBER	CP502630	SHEET	1 OF 2

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DATUM R.L. (m)	-1.0					
LID LEVEL	12.55		13.39		13.25	11.50
INVERT LEVEL	9.50	9.50	9.60	9.60	9.60	9.60
DEPTH TO INVERT	3.05		3.79		3.65	1.90
PIPE SIZE			1800mm		1800mm	1800mm
GRADE			-0.06%		-0.01%	-0.01%
CHAINAGE	445.8	171.42m	617.2	47.62m	664.8	18.13m

SW LINE OPTION A2

**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- PROPOSED BYPASS PIPE

- NOTES**
- PIPE TYPE REFERS TO A DN1800 PE100 PN 6.3 AS PER DETAIL B ON DRAWING 3384543-CE-060.
  - PUMP STATION LOCATED IN WARDEN STREET.

**ORIGINAL DRAWING IN COLOUR**

**FOR INFORMATION NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

DATUM	NAME	SIGNED	DATE
BENCH MK.	DESIGNED	DJG	06.2015
RL	DES. REVIEW	DAH	06.2015
SURVEY	DRAWN	DLM	06.2015
SURVEY LB	DRW. CHECK	DJG	06.2015

APPROVED	
FOR TENDER	SIGNED
FOR CONSTRUCTION	SIGNED

CONSULTANT	<b>Beca</b> <b>OPUS</b>
CONSULTANT PROJECT REF.	3384543 / 3C1262.00
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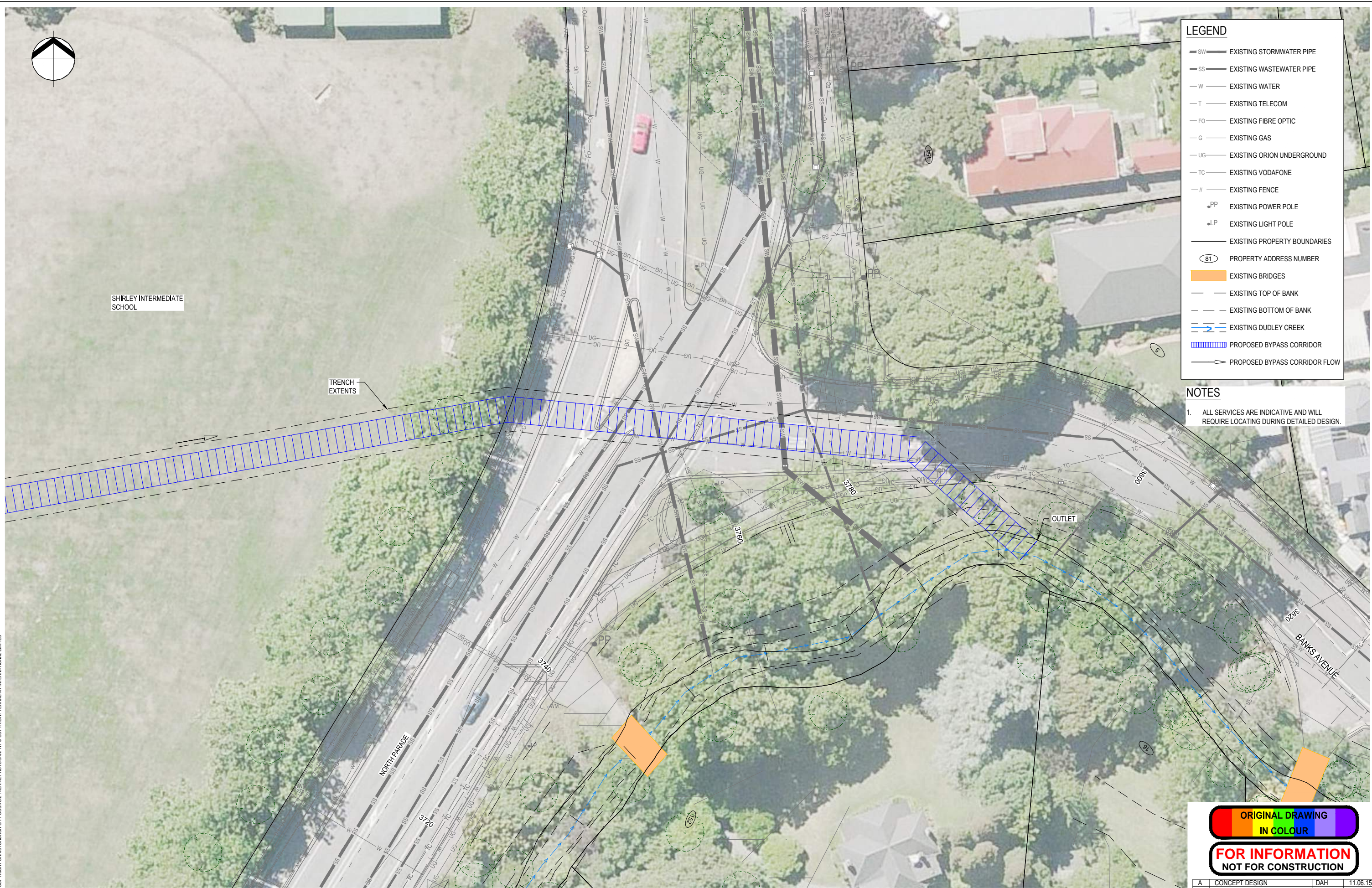
**DUDLEY CREEK FLOOD REMEDIATION**

**OPTION A2 LONG SECTION (PUMPED)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-006			SHEET	2 OF 2
CPG PROJECT FILE NUMBER	CP502630				

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**LEGEND**

- SW — EXISTING STORMWATER PIPE
- SS — EXISTING WASTEWATER PIPE
- W — EXISTING WATER
- T — EXISTING TELECOM
- FO — EXISTING FIBRE OPTIC
- G — EXISTING GAS
- UG — EXISTING ORION UNDERGROUND
- TC — EXISTING VODAFONE
- // — EXISTING FENCE
- ▲ PP — EXISTING POWER POLE
- ▲ LP — EXISTING LIGHT POLE
- — — EXISTING PROPERTY BOUNDARIES
- 81 — PROPERTY ADDRESS NUMBER
- — EXISTING BRIDGES
- — — EXISTING TOP OF BANK
- — — EXISTING BOTTOM OF BANK
- — — EXISTING DUDLEY CREEK
- ▨ — PROPOSED BYPASS CORRIDOR
- — PROPOSED BYPASS CORRIDOR FLOW

**NOTES**

1. ALL SERVICES ARE INDICATIVE AND WILL REQUIRE LOCATING DURING DETAILED DESIGN.

ORIGINAL DRAWING  
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A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

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CAPITAL PROGRAMME GROUP

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		DESIGNED	DJG	DJG	06.2015	FOR TENDER
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		SURVEY	DLM	DLM	06.2015	
		SURVEY LB	DRW. CHECK	DJG	06.2015	FOR CONSTRUCTION
			FILE LOCATION	S:\300 Drawings\CAD\		
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			SAP WBS	PRINTED ON 11-Jun-15 BY DLM1		

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CONSULTANT PROJECT REF. 3384543 / 3C1262.00

CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE

**OPTION A  
NORTH PARADE CROSSING**

CONTRACT NUMBER	ORIGINAL SHEET SIZE	SCALES
14/15-192	A1	1:200 @ A1
CAD DRAWING FILE REF. 3384543-CE-007		
CPG PROJECT FILE NUMBER	SHEET	
CP502630	1 OF 1	





**LEGEND**

- SS — EXISTING SANITARY SEWER PIPE
- SW — EXISTING STORMWATER
- — EXISTING PROPERTY BOUNDARIES
- Ⓚ B1 ○ PROPERTY ADDRESS NUMBER
- — EXISTING BRIDGES
- — EXISTING TOP OF BANK
- — EXISTING BOTTOM OF BANK
- — EXISTING DUDLEY CREEK
- — CERA REDZONE PROPERTY
- — PROPOSED BYPASS PIPE
- — PROPOSED SELECTED SECTIONS OF CHANNEL WIDENING

ORIGINAL DRAWING  
 IN COLOUR  
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DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE	APPROVED
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		DRW. CHECK	DLM	DLM	06.2015	SIGNED
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CONSULTANT PROJECT REF. 3384543 / 3C1262.00

CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

**DUDLEY CREEK FLOOD REMEDIATION**

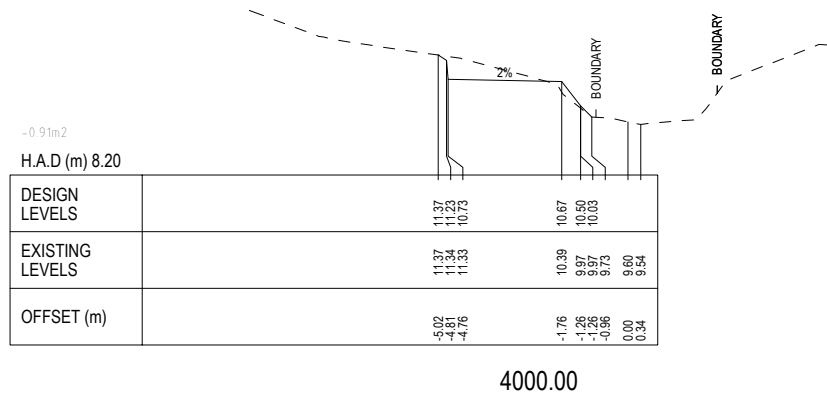
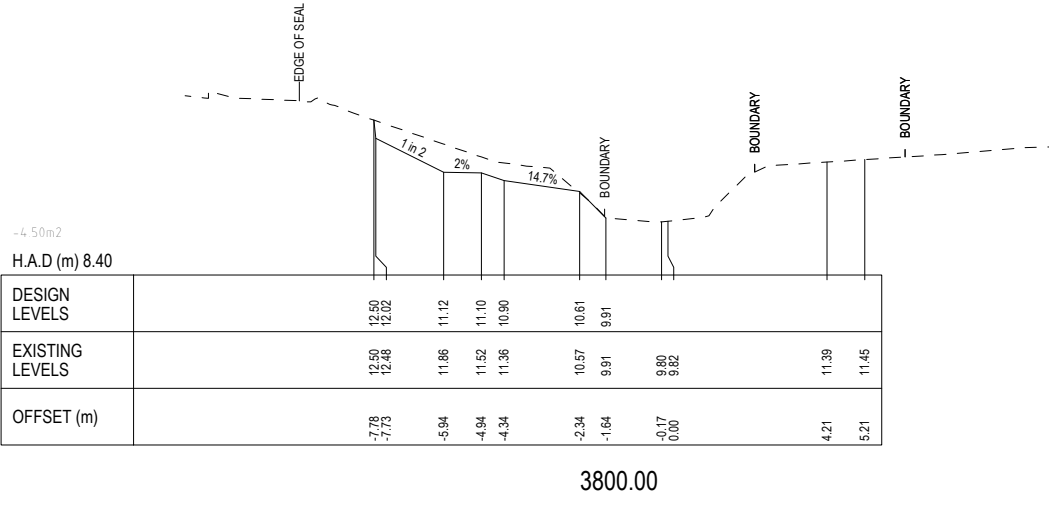
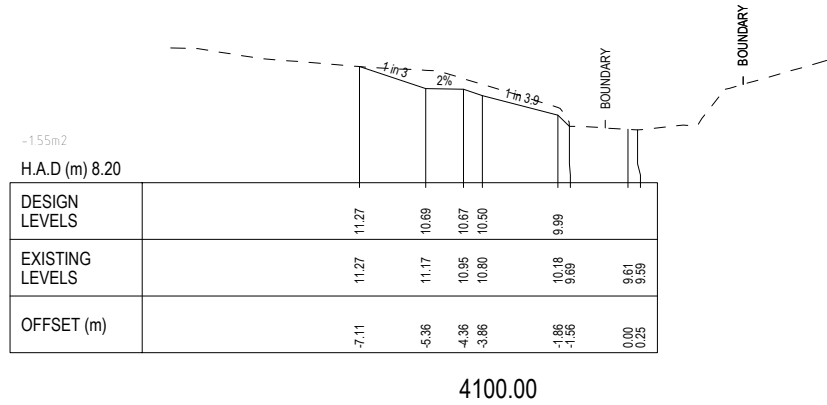
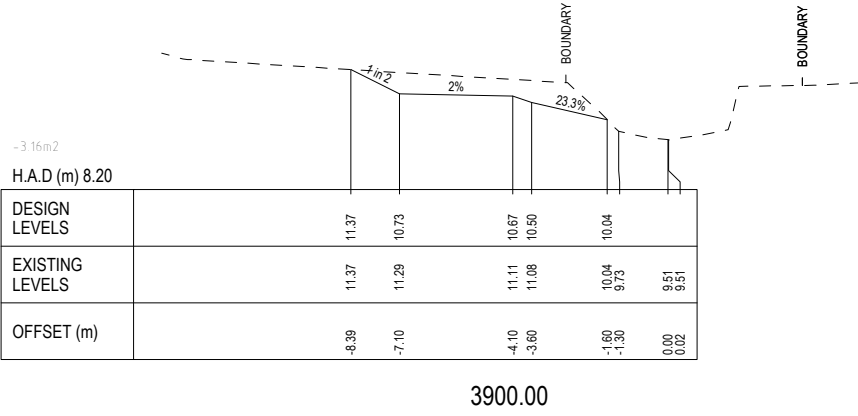
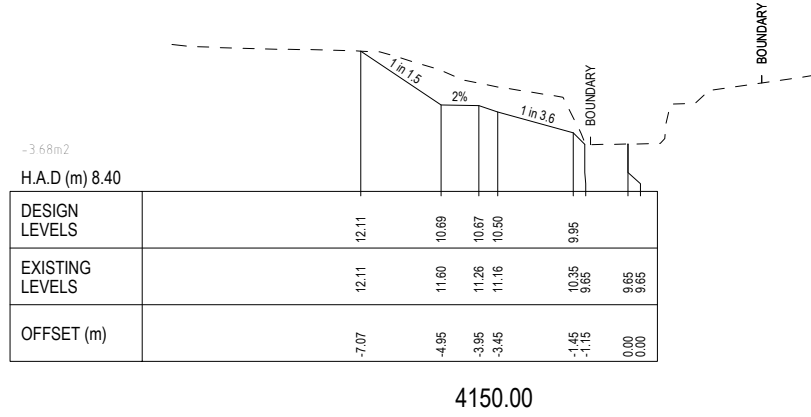
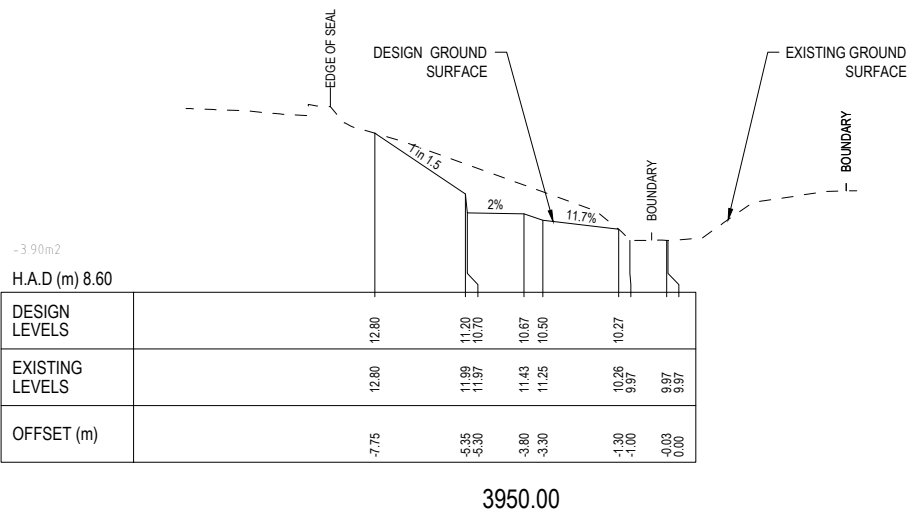
DRAWING TITLE

**OPTION A - BANKS AVENUE PLAN**

CONTRACT NUMBER	ORIGINAL SHEET SIZE	SCALES
14/15-192	A1	1:1000 @ A1
CAD DRAWING FILE REF.		
3384543-CE-010		
CPG PROJECT FILE NUMBER	SHEET	
CP502630	1 OF 1	

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE





ORIGINAL DRAWING  
IN COLOUR  
FOR INFORMATION  
NOT FOR CONSTRUCTION

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

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CAPITAL PROGRAMME GROUP

DATUM					
BENCH MK.	DESIGNED	DJG	DJG	06.2015	APPROVED
RL	DES. REVIEW	DAH	DAH	06.2015	FOR TENDER
SURVEY	DRAWN	DLM	DLM	06.2015	DATE
SURVEY LB	DRW. CHECK	DJG	DJG	06.2015	SIGNED
	FILE LOCATION	S:\300 Drawings\CAD\			
DRAIN. REF.	3384543-CE-011.dwg				
SAP WBS	PRINTED ON 12-Jun-15 BY DLM1				

CONSULTANT

**Beca** **OPUS**

CONSULTANT PROJECT REF. 3384543 / 3C1262.00

CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

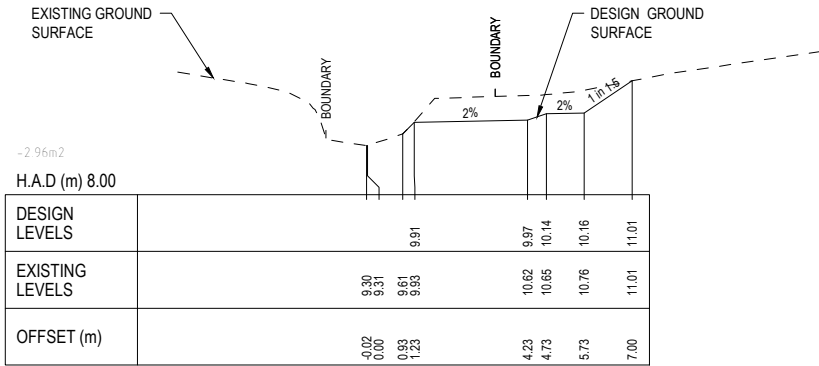
**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE

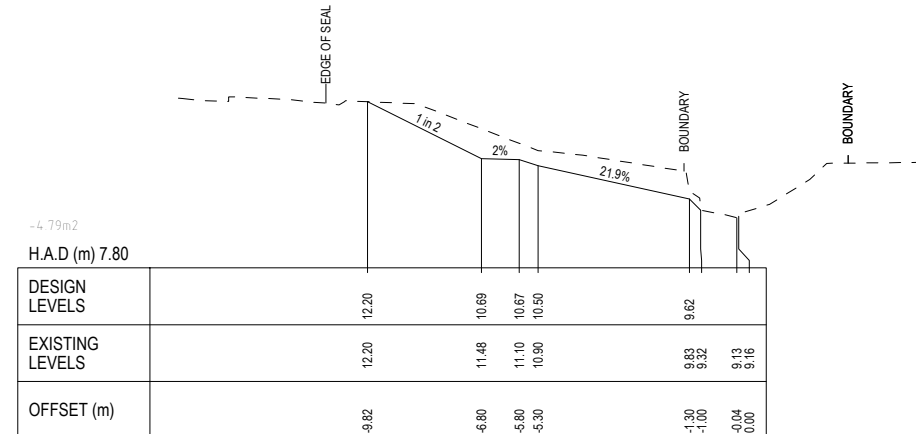
**OPTION A - BANKS AVENUE  
CROSS SECTIONS**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:100 H @ A1 1:1 V @ A1
CAD DRAWING FILE REF.	3384543-CE-011				
CPG PROJECT FILE NUMBER	CP502630	SHEET	1	OF	2

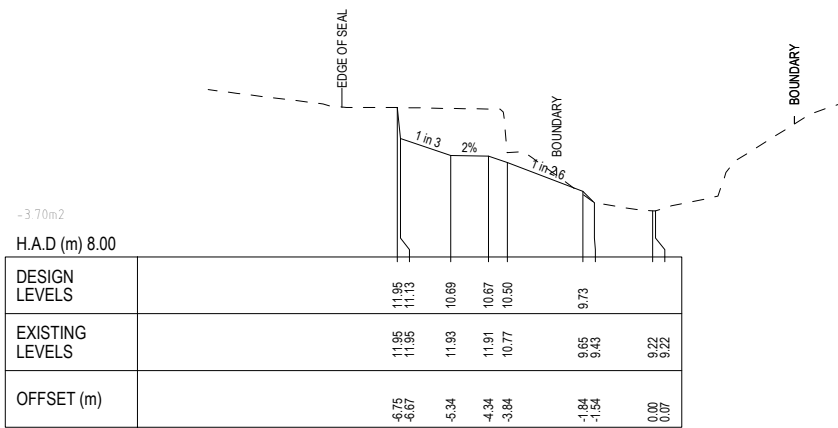




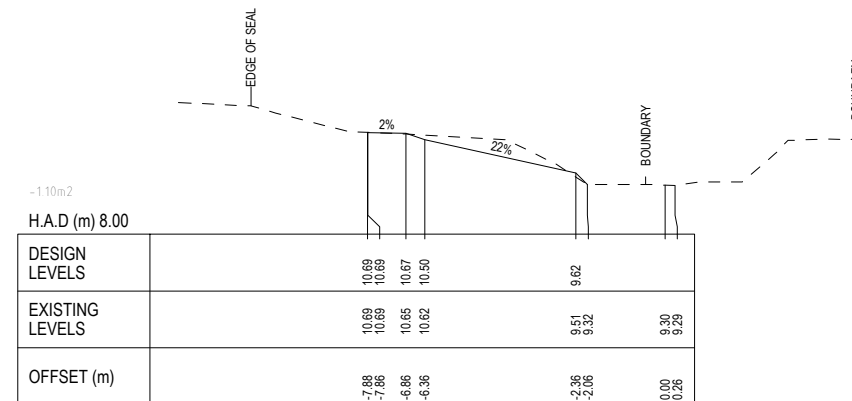
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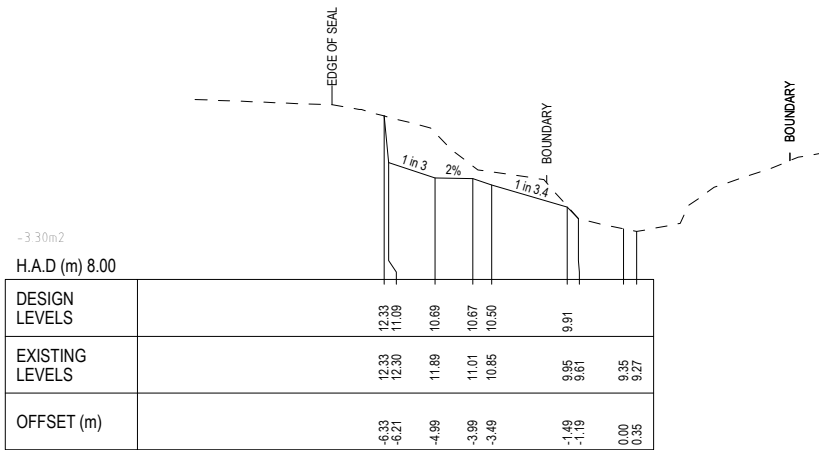
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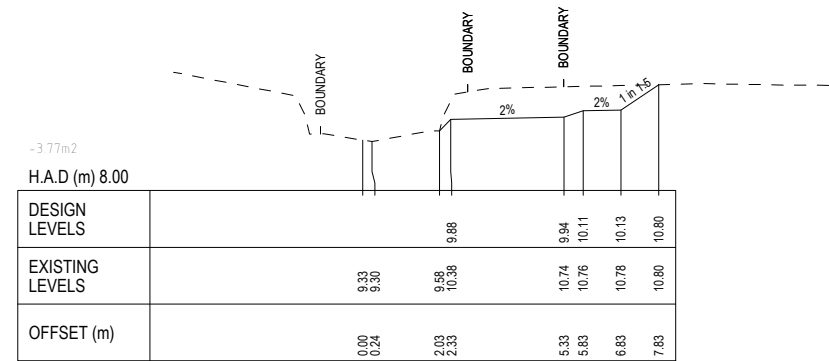
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4450.00



4250.00



4400.00

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FOR INFORMATION  
NOT FOR CONSTRUCTION

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE



DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE
		DESIGNED	DJG	DJG	06.2015
		DES. REVIEW	DAH	DAH	06.2015
		DRAWN	DLM	DLM	06.2015
		DRW. CHECK	DJG	DJG	06.2015
		FILE LOCATION	S:\300 Drawings\CAD\		
		DRAIN. REF.	3384543-CE-012.dwg		
		SAP WBS	PRINTED ON 12-Jun-15 BY DLM1		

APPROVED		CONSULTANT	
FOR TENDER	DATE	SIGNED	
FOR CONSTRUCTION	DATE	SIGNED	
CONSULTANT PROJECT REF.	3384543 / 3C1262.00		
CONSULTANT FILE REF.	S:\300 Drawings\CAD		

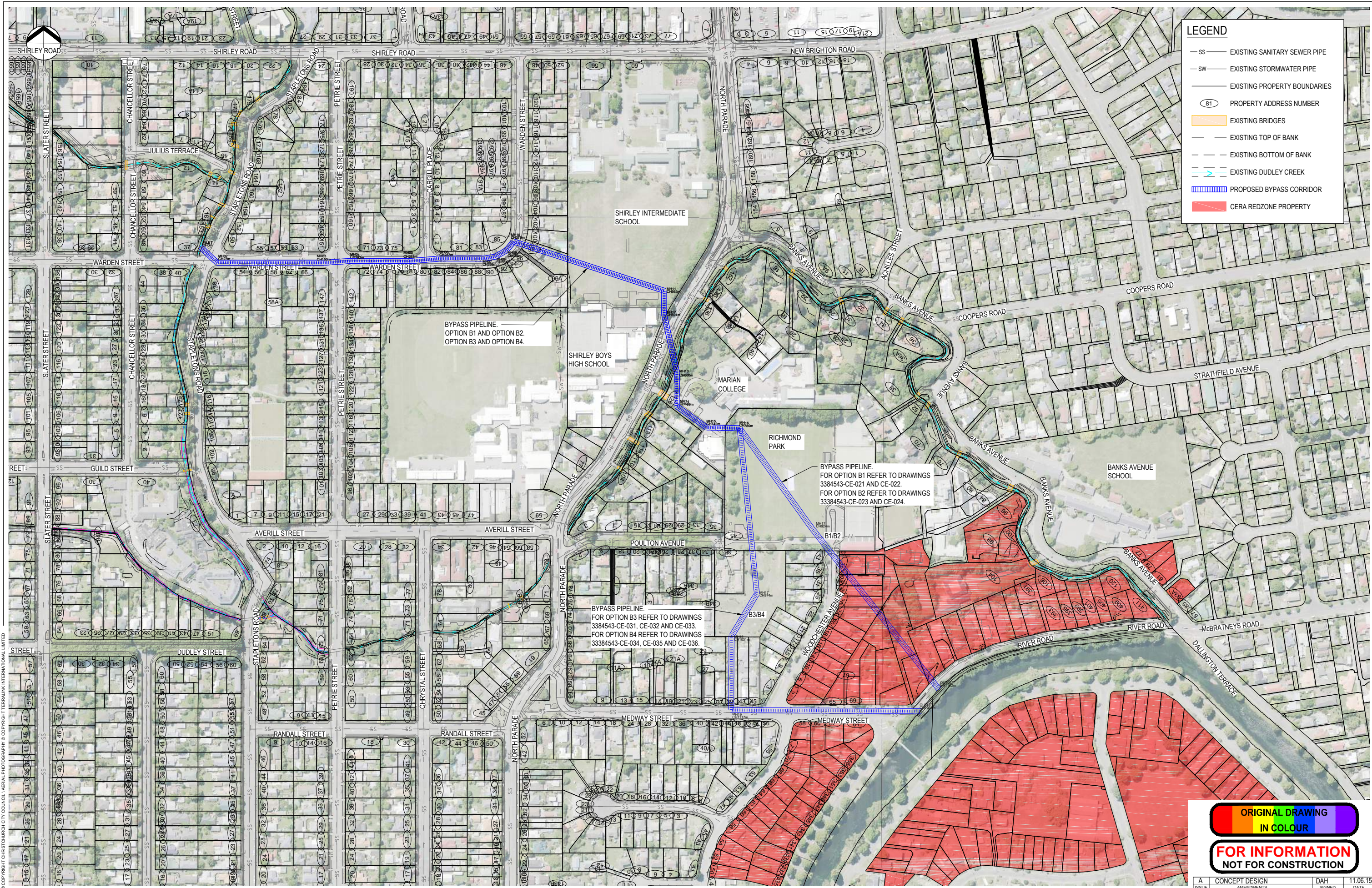
PROJECT TITLE  
**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE  
**OPTION A - BANKS AVENUE  
CROSS SECTIONS**

CONTRACT NUMBER 14/15-192	ORIGINAL SHEET SIZE A1	SCALES 1:100 H @ A1 1:1 V @ A1
CAD DRAWING FILE REF. 3384543-CE-012	CPG PROJECT FILE NUMBER CP502630	SHEET 2 OF 2

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**LEGEND**

- SS — EXISTING SANITARY SEWER PIPE
- SW — EXISTING STORMWATER PIPE
- — EXISTING PROPERTY BOUNDARIES
- ⊙ B1 ⊙ PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- - - EXISTING TOP OF BANK
- - - EXISTING BOTTOM OF BANK
- — — EXISTING DUDLEY CREEK
- ▨ PROPOSED BYPASS CORRIDOR
- CERA REDZONE PROPERTY

BYPASS PIPELINE.  
OPTION B1 AND OPTION B2.  
OPTION B3 AND OPTION B4.

BYPASS PIPELINE.  
FOR OPTION B1 REFER TO DRAWINGS  
3384543-CE-021 AND CE-022.  
FOR OPTION B2 REFER TO DRAWINGS  
33384543-CE-023 AND CE-024.

BYPASS PIPELINE.  
FOR OPTION B3 REFER TO DRAWINGS  
3384543-CE-031, CE-032 AND CE-033.  
FOR OPTION B4 REFER TO DRAWINGS  
33384543-CE-034, CE-035 AND CE-036.

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IN COLOUR

FOR INFORMATION  
NOT FOR CONSTRUCTION

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

**Christchurch City Council**  
CAPITAL PROGRAMME GROUP

DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE
RL		DES. REVIEW	DJG	DJG	06.2015
SURVEY		DRAWN	DLM	DLM	06.2015
SURVEY LB		DRW. CHECK	DJG	DJG	06.2015
DRAIN. REF.	3384543-CE-020.dwg	FILE LOCATION	S:\300 Drawings\CAD\		
SAP WBS	PRINTED ON 11-Jun-15 BY DLM1				

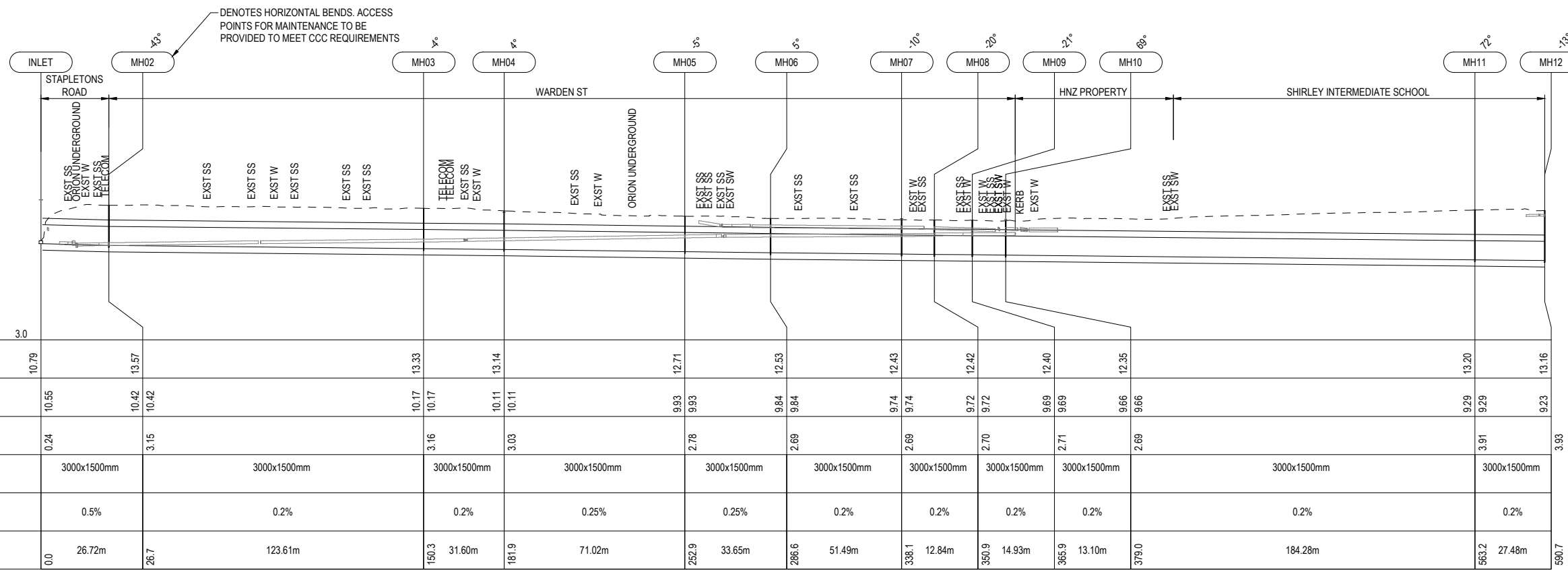
<b>APPROVED</b>		CONSULTANT	
FOR TENDER	DATE		
DATE	SIGNED		
FOR CONSTRUCTION		CONSULTANT PROJECT REF.	
DATE	SIGNED	3384543 / 3C1262.00	
		CONSULTANT FILE REF.	
		S:\300 Drawings\CAD	

PROJECT TITLE  
**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE  
**OPITON B - B1 AND B3 (GRAVITY)  
AND B2 AND B4 (PUMPED)**

CONTRACT NUMBER	ORIGINAL SHEET SIZE	SCALES
14/15-192	A1	1:2000 @ A1
CAD DRAWING FILE REF.		
3384543-CE-020		
CPG PROJECT FILE NUMBER	SHEET	
CP502630	1 OF 1	





**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- PROPOSED BYPASS PIPE

- NOTES**
- PIPE TYPE REFERS TO A 3.0m WIDE x 1.5m HIGH BOX CULVERT AS PER DETAIL A ON DRAWING 3384543-CE-050.

SW LINE OPTION B1



**FOR INFORMATION NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

DATUM BENCH MK.	DESIGNED	DJG	DJG	06.2015
RL	DES. REVIEW	DAH	DAH	06.2015
SURVEY	DRAWN	DLM	DLM	06.2015
SURVEY LB	DRW. CHECK	DJG	DJG	06.2015
FILE LOCATION	S:\300 Drawings\CAD\			
DRAIN. REF.	3384543-CE-021.dwg			
SAP WBS	PRINTED ON 11-Jun-15 BY DLM1			

<b>APPROVED</b>	
FOR TENDER	SIGNED
DATE	SIGNED
FOR CONSTRUCTION	SIGNED
DATE	SIGNED

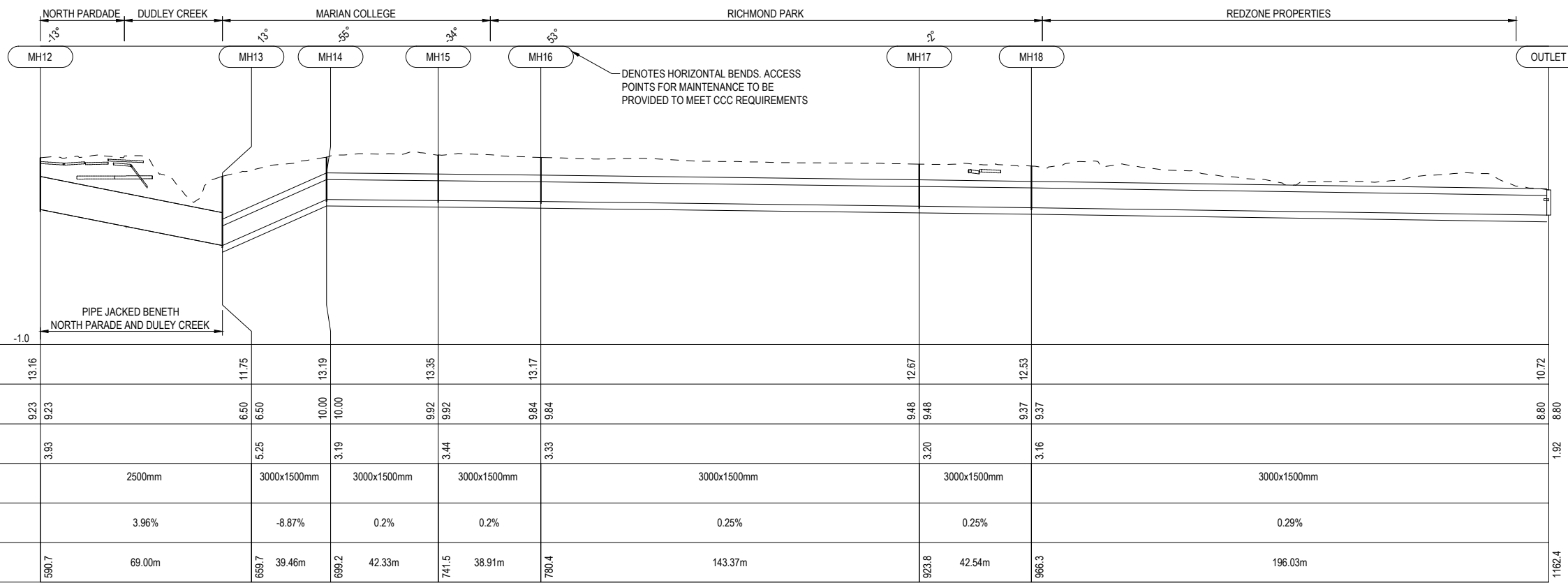
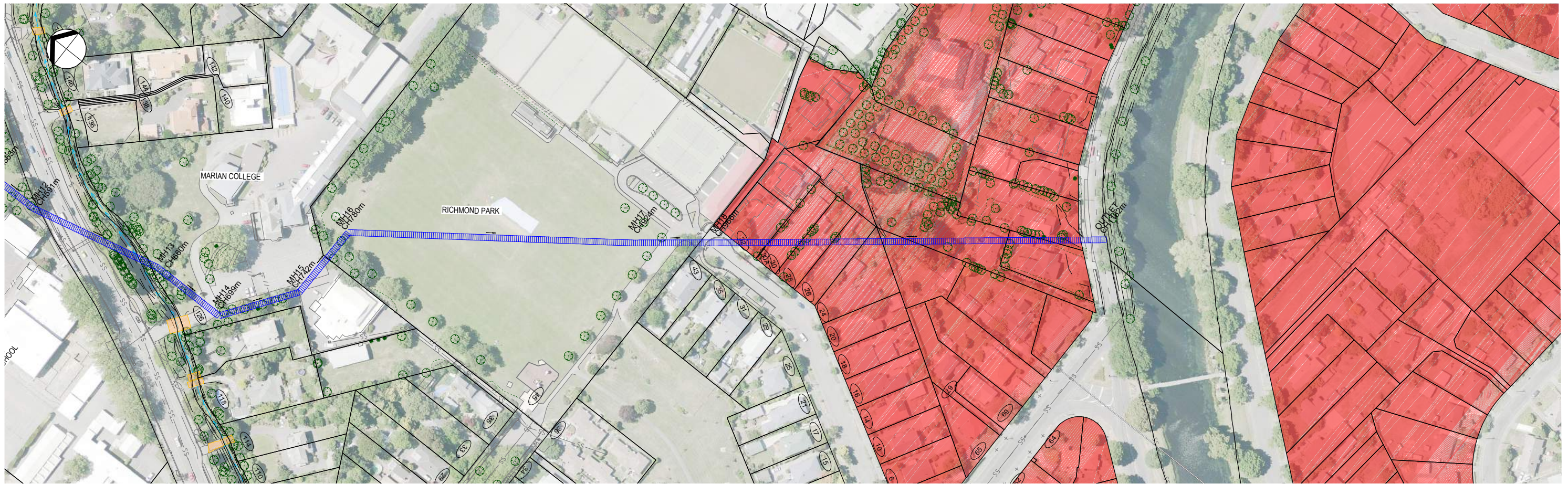
CONSULTANT	<b>Beca</b> <b>OPUS</b>
CONSULTANT PROJECT REF.	3384543 / 3C1262.00
CONSULTANT FILE REF.	S:\300 Drawings\CAD

PROJECT TITLE  
**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE  
**OPTION B1 LONG SECTION (GRAVITY)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-021	CPG PROJECT FILE NUMBER	CP502630	SHEET	1 OF 2





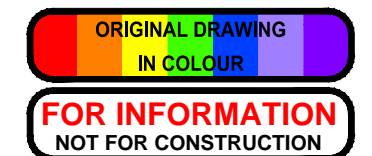
SW LINE OPTION B1

**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- — EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- (81) PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- CERA REDZONE PROPERTY
- PROPOSED BYPASS PIPE

**NOTES**

- PIPE TYPE REFERS TO A 3.0m WIDE x 1.5m HIGH BOX CULVERT AS PER DETAIL A ON DRAWING 3384543-CE-050.



A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

DATUM	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	DJG	DJG	DJG	06.2015
RL	DAH	DAH	DAH	06.2015
SURVEY	DLM	DLM	DLM	06.2015
SURVEY LB	DJG	DJG	DJG	06.2015
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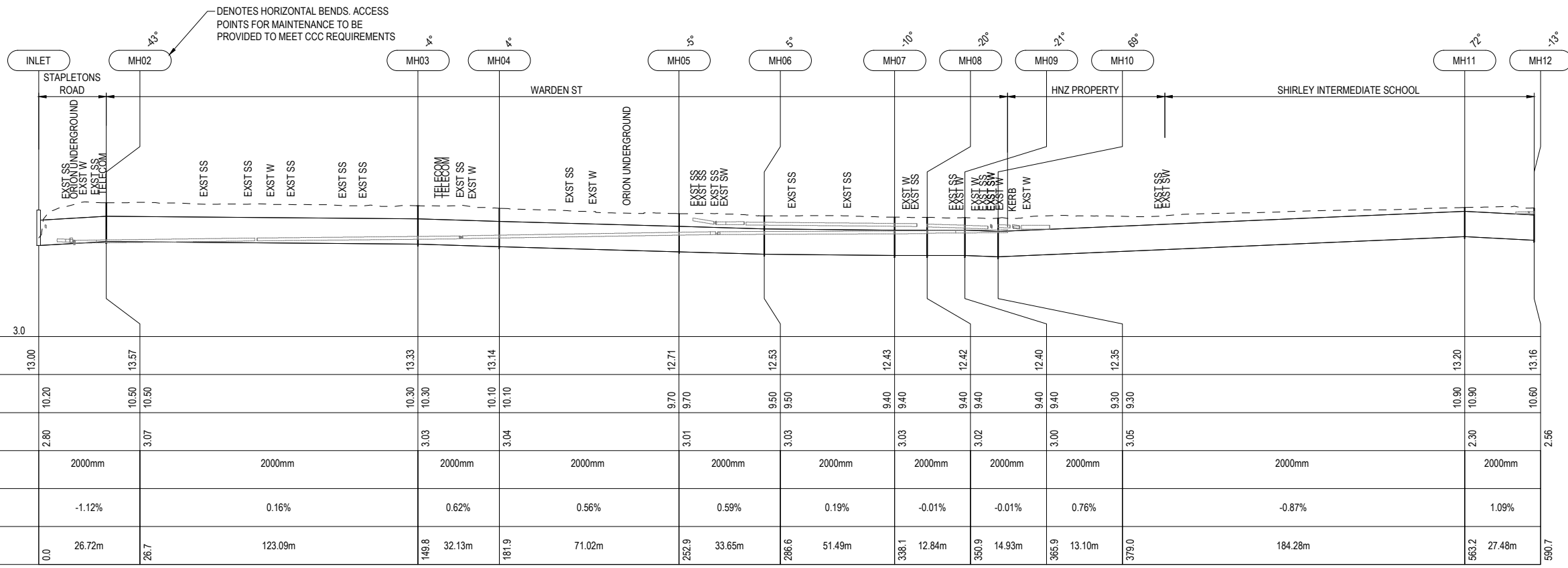
APPROVED	
FOR TENDER	
FOR CONSTRUCTION	

CONSULTANT		PROJECT TITLE	
<b>Beca</b>	<b>OPUS</b>	<b>DUDLEY CREEK FLOOD REMEDIATION</b>	
CONSULTANT PROJECT REF. 3384543 / 3C1262.00		CONSULTANT FILE REF. S:\300 Drawings\CAD	

DRAWING TITLE	
<b>OPTION B1 LONG SECTION (GRAVITY)</b>	

CONTRACT NUMBER 14/15-192	ORIGINAL SHEET SIZE A1	SCALES 1:1000 @ A1
CAD DRAWING FILE REF. 3384543-CE-022	SHEET 2 OF 2	
CPG PROJECT FILE NUMBER CP502630		





**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- PROPOSED BYPASS PIPE

- NOTES**
- PIPE TYPE REFERS TO A DN2000 PE100 PN 6.3 AS PER DETAIL B ON DRAWING 3384543-CE-060.
  - PUMP STATION LOCATED IN WARDEN STREET.

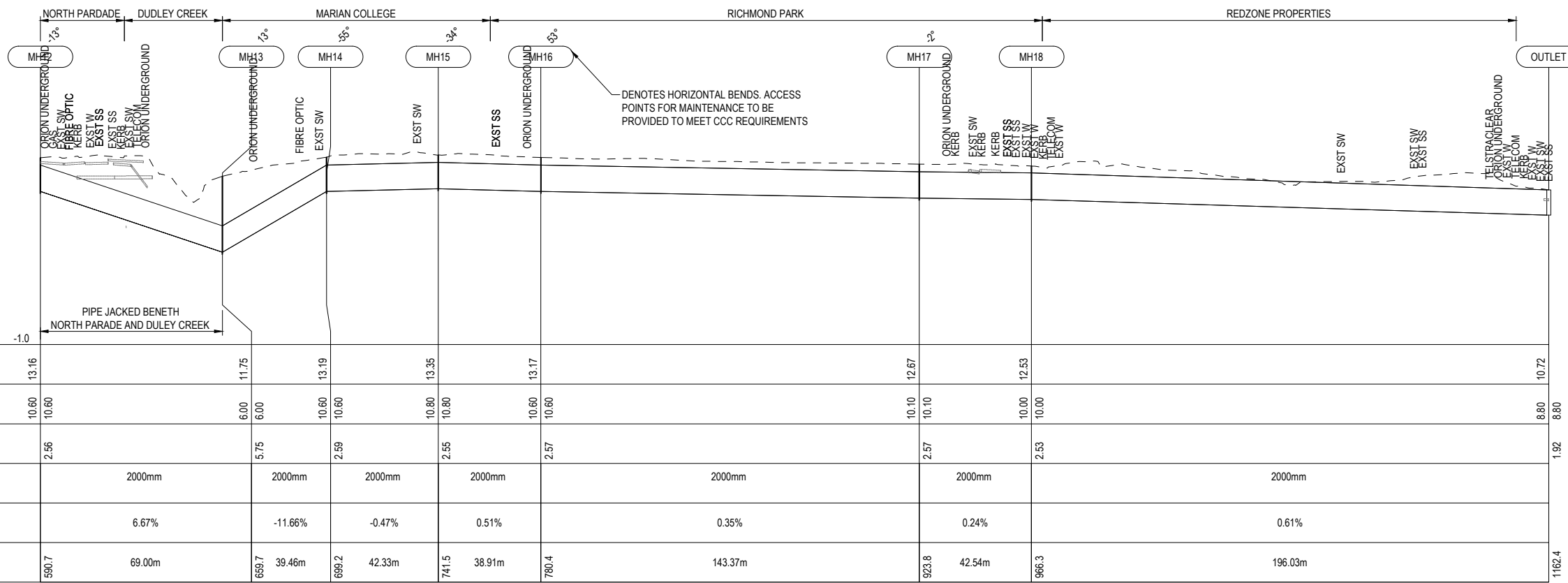
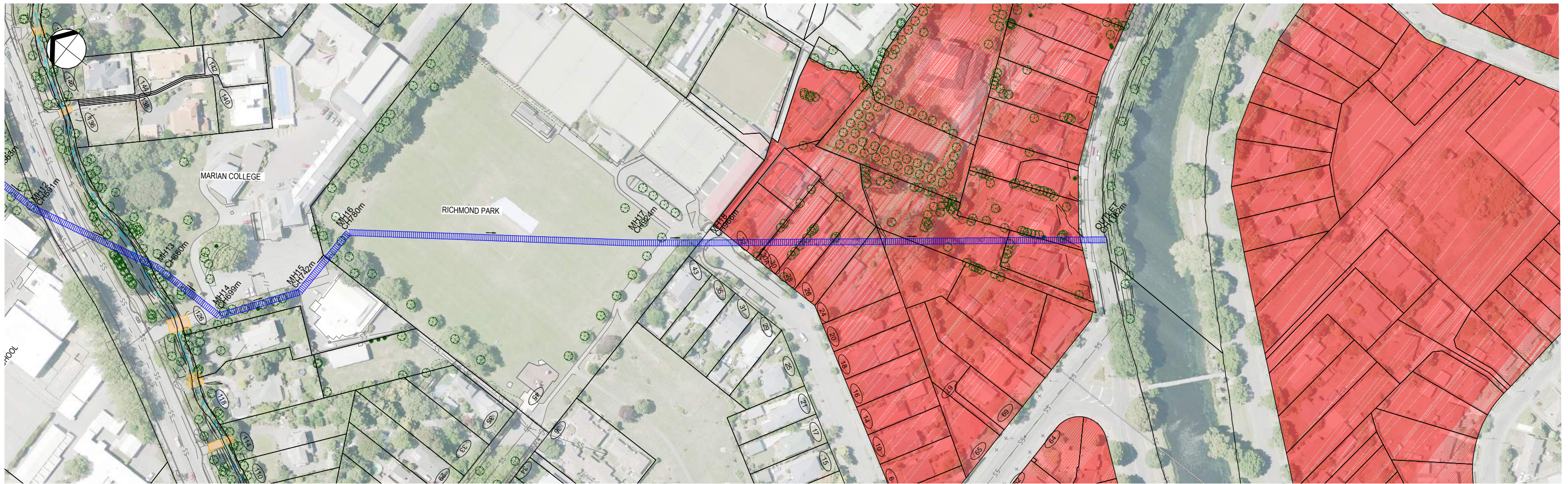
ORIGINAL DRAWING  
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SW LINE OPTION B2

<p><b>Christchurch City Council</b> CAPITAL PROGRAMME GROUP</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>DATUM</th><td>BENCH MK.</td></tr> <tr><th>DESIGNED</th><td>DJG</td></tr> <tr><th>DES. REVIEW</th><td>DAH</td></tr> <tr><th>DRAWN</th><td>DLM</td></tr> <tr><th>DRW. CHECK</th><td>DJG</td></tr> <tr><th>FILE LOCATION</th><td>S:\300 Drawings\CAD\</td></tr> <tr><th>DRAIN. REF.</th><td>3384543-CE-023.dwg</td></tr> <tr><th>SAP WBS</th><td>PRINTED ON 11-Jun-15 BY DLM1</td></tr> </table>	DATUM	BENCH MK.	DESIGNED	DJG	DES. REVIEW	DAH	DRAWN	DLM	DRW. CHECK	DJG	FILE LOCATION	S:\300 Drawings\CAD\	DRAIN. REF.	3384543-CE-023.dwg	SAP WBS	PRINTED ON 11-Jun-15 BY DLM1	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>NAME</th><td>DJG</td></tr> <tr><th>SIGNED</th><td>DJG</td></tr> <tr><th>DATE</th><td>06.2015</td></tr> </table>	NAME	DJG	SIGNED	DJG	DATE	06.2015	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>APPROVED</th><td>FOR TENDER</td></tr> <tr><td> </td><td> </td></tr> <tr><th>APPROVED</th><td>FOR CONSTRUCTION</td></tr> <tr><td> </td><td> </td></tr> </table>	APPROVED	FOR TENDER			APPROVED	FOR CONSTRUCTION			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>CONSULTANT</th><td></td></tr> <tr><th>CONSULTANT PROJECT REF.</th><td>3384543 / 3C1262.00</td></tr> <tr><th>CONSULTANT FILE REF.</th><td>S:\300 Drawings\CAD</td></tr> </table>	CONSULTANT		CONSULTANT PROJECT REF.	3384543 / 3C1262.00	CONSULTANT FILE REF.	S:\300 Drawings\CAD	<p><b>DUDLEY CREEK FLOOD REMEDIATION</b></p>	<p><b>OPTION B2 LONG SECTION (PUMPED)</b></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>CONTRACT NUMBER</th><td>14/15-192</td></tr> <tr><th>CAD DRAWING FILE REF.</th><td>3384543-CE-023</td></tr> <tr><th>CPG PROJECT FILE NUMBER</th><td>CP502630</td></tr> </table>	CONTRACT NUMBER	14/15-192	CAD DRAWING FILE REF.	3384543-CE-023	CPG PROJECT FILE NUMBER	CP502630	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>ORIGINAL SHEET SIZE</th><td>A1</td></tr> <tr><th>SCALES</th><td>1:1000 @ A1</td></tr> <tr><th>SHEET</th><td>1 OF 2</td></tr> </table>	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1	SHEET	1 OF 2
	DATUM	BENCH MK.																																																						
DESIGNED	DJG																																																							
DES. REVIEW	DAH																																																							
DRAWN	DLM																																																							
DRW. CHECK	DJG																																																							
FILE LOCATION	S:\300 Drawings\CAD\																																																							
DRAIN. REF.	3384543-CE-023.dwg																																																							
SAP WBS	PRINTED ON 11-Jun-15 BY DLM1																																																							
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SHEET	1 OF 2																																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th>ISSUE</th><td>A</td></tr> <tr><th>CONCEPT DESIGN</th><td> </td></tr> <tr><th>AMENDMENTS</th><td> </td></tr> <tr><th>SIGNED</th><td>DAH</td></tr> <tr><th>DATE</th><td>11.06.15</td></tr> </table>		ISSUE	A	CONCEPT DESIGN		AMENDMENTS		SIGNED	DAH	DATE	11.06.15																																													
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DATE	11.06.15																																																							





**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- Ⓢ1 PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- CERA REDZONE PROPERTY
- PROPOSED BYPASS PIPE

**NOTES**

- PIPE TYPE REFERS TO A DN2000 PE100 PN 6.3 AS PER DETAIL B ON DRAWING 3384543-CE-060.

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SW LINE OPTION B2

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LEGEND	
— SS —	EXISTING SANITARY SEWER PIPE AND MANHOLE
— SW —	EXISTING STORMWATER PIPE AND MANHOLE
— // —	EXISTING FENCE
⦿	EXISTING POWER POLE
⦿	EXISTING LIGHT POLE
—	EXISTING PROPERTY BOUNDARIES
81	PROPERTY ADDRESS NUMBER
—	EXISTING BRIDGES
—	EXISTING TOP OF BANK
—	EXISTING BOTTOM OF BANK
—	EXISTING DUDLEY CREEK
—	PROPOSED BYPASS CORRIDOR
—	PROPOSED BYPASS CORRIDOR FLOW

**ORIGINAL DRAWING  
IN COLOUR**

**FOR INFORMATION  
NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

**Christchurch City Council**

CAPITAL PROGRAMME GROUP

DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE
		DJG	DJG	DJG	06.2015
		DAH	DAH	DAH	06.2015
		DLM	DLM	DLM	06.2015
		DJG	DJG	DJG	06.2015

APPROVED	
FOR TENDER	FOR CONSTRUCTION
DATE	SIGNED

CONSULTANT

**Beca** **OPUS**

CONSULTANT PROJECT REF. 3384543 / 3C1262.00

CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE

**OPTION B  
DUDLEY CREEK CROSSING**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:500 @ A1
CAD DRAWING FILE REF.	3384543-CE-026				
CPG PROJECT FILE NUMBER	CP502630	SHEET	1	OF	1

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DENOTES HORIZONTAL BENDS. ACCESS POINTS FOR MAINTENANCE TO BE PROVIDED TO MEET CCC REQUIREMENTS

	INLET	MH2	MH3	MH4	MH5	MH6	MH7	MH8	MH9	MH10	MH11	MH12											
DATUM R.L. (m)	3.0																						
LID LEVEL	10.79	13.57	13.33	13.14	12.71	12.53	12.43	12.42	12.40	12.35	13.20	13.16											
INVERT LEVEL	10.55	10.42	10.17	10.11	9.93	9.84	9.74	9.72	9.69	9.66	9.29	9.23											
DEPTH TO INVERT	0.24	3.15	3.16	3.03	2.78	2.69	2.69	2.70	2.71	2.69	3.91	3.93											
PIPE SIZE	3000x1500mm	3000x1500mm	3000x1500mm	3000x1500mm	3000x1500mm	3000x1500mm	3000x1500mm	3000x1500mm	3000x1500mm	3000x1500mm	3000x1500mm	3000x1500mm											
GRADE	0.5%	0.2%	0.2%	0.25%	0.25%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%											
CHAINAGE	0.0	26.72m	26.7	123.61m	150.3	31.60m	181.9	71.02m	252.9	33.65m	286.6	51.49m	338.1	12.84m	350.9	14.93m	365.9	13.10m	379.0	184.28m	563.2	27.48m	590.7

SW LINE OPTION B3

**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- PROPOSED BYPASS PIPE

- NOTES**
- PIPE TYPE REFERS TO A 3.0m WIDE x 1.5m HIGH BOX CULVERT AS PER DETAIL A ON DRAWING 3384543-CE-050.



**FOR INFORMATION NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

**Christchurch City Council**  
CAPITAL PROGRAMME GROUP

DATUM	NAME	SIGNED	DATE
BENCH MK.	DESIGNED	DJG	06.2015
RL	DES. REVIEW	DAH	06.2015
SURVEY	DRAWN	DLM	06.2015
SURVEY LB	DRW. CHECK	DJG	06.2015
	FILE LOCATION	S:\300 Drawings\CAD\	
DRAIN. REF.	3384543-CE-031.dwg		
SAP WBS	PRINTED ON 11-Jun-15 BY DLM1		

APPROVED	
FOR TENDER	SIGNED
DATE	SIGNED
FOR CONSTRUCTION	SIGNED
DATE	SIGNED

CONSULTANT

**Beca** **OPUS**

CONSULTANT PROJECT REF. 3384543 / 3C1262.00

CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

**DUDLEY CREEK FLOOD REMEDIATION**

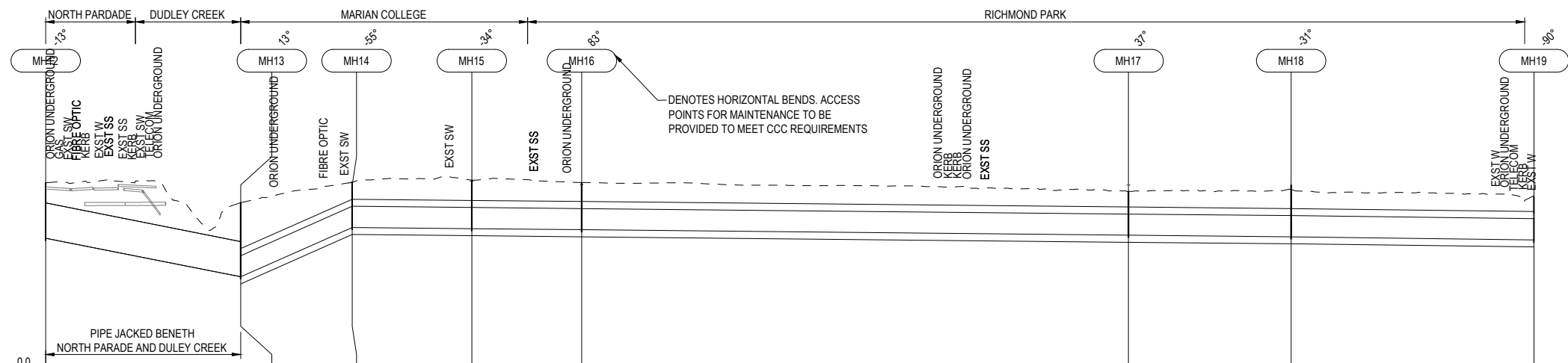
DRAWING TITLE

**OPTION B3 LONG SECTION (GRAVITY)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-031	CPG PROJECT FILE NUMBER	CP502630	SHEET	1 OF 3

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**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- PROPOSED BYPASS PIPE

**NOTES**

- PIPE TYPE REFERS TO A 3.0m WIDE x 1.5m HIGH BOX CULVERT AS PER DETAIL A ON DRAWING 3384543-CE-050.

DATUM R.L. (m)	0.0															
LID LEVEL	13.16		11.75	13.19	13.35	13.17			12.54	13.00			12.20			
INVERT LEVEL	9.23	9.23	6.50	10.00	9.92	9.84	9.84		9.45	9.34	9.34		9.12	9.10		
DEPTH TO INVERT	3.93		5.25	3.19	3.44	3.33			3.09	3.66			3.10	3.08		
PIPE SIZE		2500mm	3000x1500mm	3000x1500mm	3000x1500mm		3000x1500mm		3000x1500mm	3000x1500mm			3000x1500mm			
GRADE		3.96%	-8.87%	0.2%	0.2%		0.2%		0.2%	0.25%			0.25%			
CHAINAGE	690.7	69.00m	669.7	39.46m	669.2	42.33m	741.5	38.91m	780.4	193.45m	973.9	57.54m	1031.4	85.92m		1117.3

SW LINE Option B3

**ORIGINAL DRAWING  
IN COLOUR**

**FOR INFORMATION  
NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

**Christchurch City Council**

CAPITAL PROGRAMME GROUP

DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE
RL	DES. REVIEW	DAH	DJG	DJG	06.2015
SURVEY	DRAWN	DLM	DLM	06.2015	
SURVEY LB	DRW. CHECK	DJG	DJG	06.2015	
	FILE LOCATION	S:\300 Drawings\CAD\			
DRAIN. REF.	3384543-CE-032.dwg				
SAP WBS	PRINTED ON 11-Jun-15 BY DLM1				

**APPROVED**

FOR TENDER

DATE: \_\_\_\_\_ SIGNED: \_\_\_\_\_

FOR CONSTRUCTION

DATE: \_\_\_\_\_ SIGNED: \_\_\_\_\_

CONSULTANT

**Beca** **OPUS**

CONSULTANT PROJECT REF. 3384543 / 3C1262.00

CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

**DUDLEY CREEK FLOOD REMEDIATION**

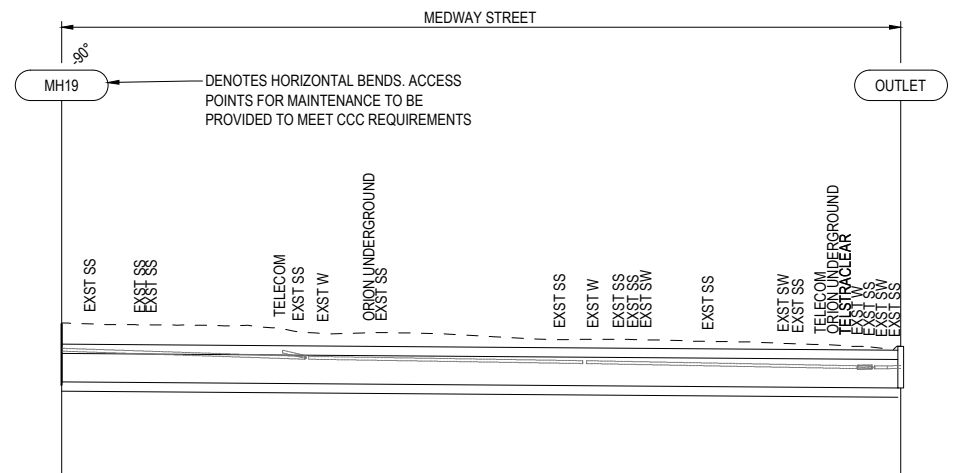
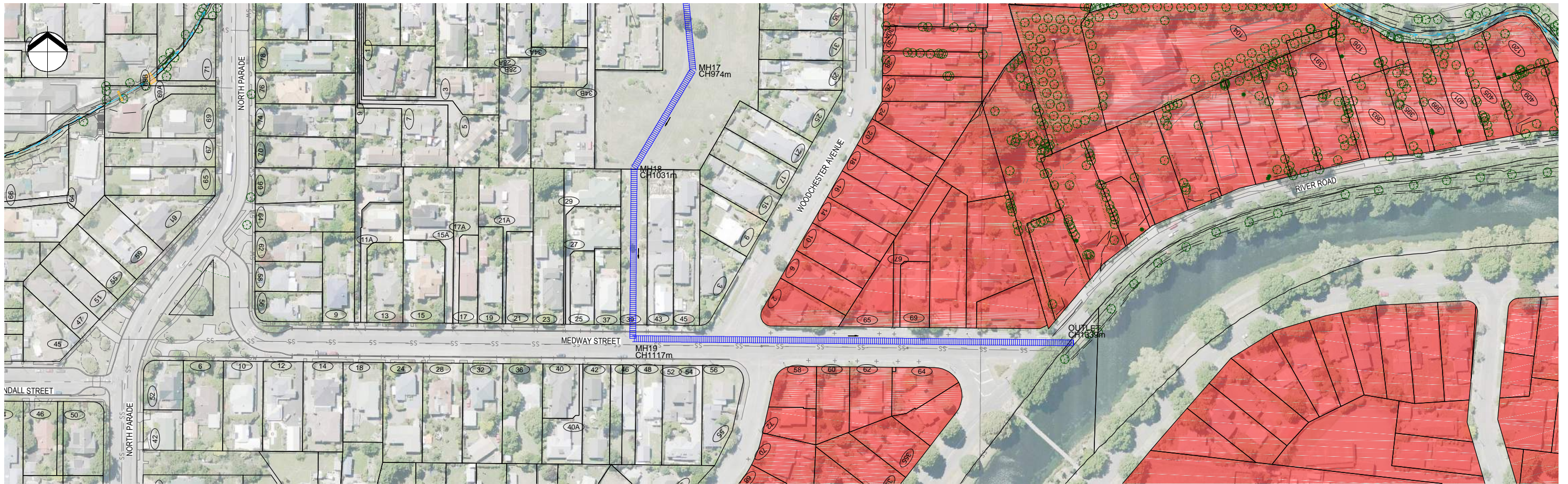
DRAWING TITLE

**OPTION B3 LONG SECTION  
(GRAVITY)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-032				
CPG PROJECT FILE NUMBER	CP502630	SHEET	2	OF	3

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DATUM R.L. (m)	3.0		
LID LEVEL	12.20		11.00
INVERT LEVEL	9.12 9.10	9.12	8.80 8.80
DEPTH TO INVERT	3.10 3.08		2.20
PIPE SIZE		3000x1500mm	
GRADE		0.14%	
CHAINAGE	1117.3	222.02m	1339.4

SW LINE OPTION B3

**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- (81) PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- CERA REDZONE PROPERTY
- PROPOSED BYPASS PIPE

**NOTES**

- PIPE TYPE REFERS TO A 3.0m WIDE x 1.5m HIGH BOX CULVERT AS PER DETAIL A ON DRAWING 3384543-CE-050.

**ORIGINAL DRAWING  
IN COLOUR**

**FOR INFORMATION  
NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

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**Christchurch City Council**

CAPITAL PROGRAMME GROUP

DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE
RL		DAH	DJG	DJG	06.2015
SURVEY		DLM	DLM	DLM	06.2015
SURVEY LB		DJG	DJG	DJG	06.2015
DRAIN REF.	3384543-CE-033.dwg				
SAP WBS	PRINTED ON 11-Jun-15 BY DLM1				

**APPROVED**

FOR TENDER

DATE SIGNED

**Beca** **OPUS**

FOR CONSTRUCTION

DATE SIGNED

CONSULTANT PROJECT REF. 3384543 / 3C1262.00

CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE

**OPTION B3 LONG SECTION  
(GRAVITY)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-033				
CPG PROJECT FILE NUMBER	CP502630	SHEET	3	OF	3





DENOTES HORIZONTAL BENDS. ACCESS POINTS FOR MAINTENANCE TO BE PROVIDED TO MEET CCC REQUIREMENTS

	INLET	MH02	MH03	MH04	MH05	MH06	MH07	MH08	MH09	MH10	MH11	MH12											
DATUM R.L. (m)	3.0																						
LID LEVEL	12.50	13.57	13.33	13.14	12.71	12.53	12.43	12.42	12.40	12.35	13.20	13.16											
INVERT LEVEL	10.20	10.50	10.30	10.10	9.70	9.50	9.40	9.40	9.40	9.30	10.60	10.60											
DEPTH TO INVERT	2.30	3.07	3.03	3.04	3.01	3.03	3.03	3.02	3.00	3.05	2.60	2.56											
PIPE SIZE	2000mm	2000mm	2000mm	2000mm	2000mm	2000mm	2000mm	2000mm	2000mm	2000mm	2000mm	2000mm											
GRADE	-1.12%	0.16%	0.62%	0.56%	0.59%	0.19%	-0.01%	-0.01%	0.76%	-0.71%	-0.01%	-0.01%											
CHAINAGE	0.0	26.72m	26.7	123.09m	149.8	32.13m	181.9	71.02m	252.9	33.65m	286.6	51.49m	338.1	12.84m	350.9	14.93m	365.9	13.10m	379.0	184.28m	563.2	27.48m	590.7

SW LINE OPTION B4

**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- PROPOSED BYPASS PIPE

- NOTES**
- PIPE TYPE REFERS TO A DN2000 PE100 PN 6.3 AS PER DETAIL B ON DRAWING 3384543-CE-060.
  - PUMP STATION LOCATED IN WARDEN STREET.

ORIGINAL DRAWING  
IN COLOUR  
FOR INFORMATION  
NOT FOR CONSTRUCTION

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

**Christchurch City Council**
  
 CAPITAL PROGRAMME GROUP

DATUM	NAME	SIGNED	DATE
BENCH MK.	DESIGNED	DJG	DJG 06.2015
RL	DES. REVIEW	DAH	DAH 06.2015
SURVEY	DRAWN	DLM	DLM 06.2015
SURVEY LB	DRW. CHECK	DJG	DJG 06.2015
	FILE LOCATION	S:\300 Drawings\CAD\	
DRAIN. REF.	3384543-CE-034.dwg		
SAP WBS	PRINTED ON 11-Jun-15 BY DLM1		

APPROVED	
FOR TENDER	DATE SIGNED
FOR CONSTRUCTION	DATE SIGNED

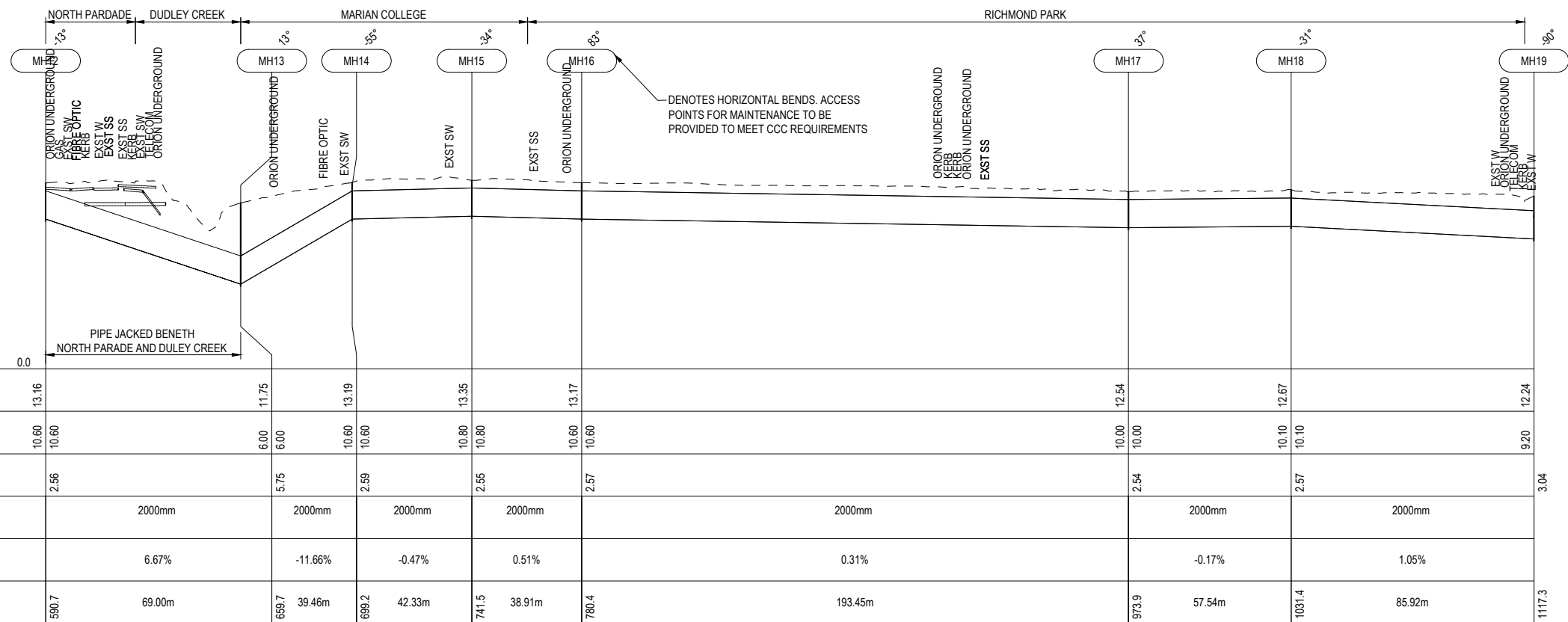
**Beca** **OPUS**

PROJECT TITLE  
**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE  
**OPTION B4 LONG SECTION  
(PUMPED)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-034				
CPG PROJECT FILE NUMBER	CP502630	SHEET	1	OF	3





**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- PROPOSED BYPASS PIPE

**NOTES**

- PIPE TYPE REFERS TO A DN2000 PE100 PN 6.3 AS PER DETAIL B ON DRAWING 3384543-CE-060.

**ORIGINAL DRAWING IN COLOUR**

**FOR INFORMATION NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

**Christchurch City Council**

CAPITAL PROGRAMME GROUP

DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE
RL		DES. REVIEW	DAH	DJG	06.2015
SURVEY		DRAWN	DLM	DAH	06.2015
SURVEY LB		DRW. CHECK	DJG	DJG	06.2015
		FILE LOCATION	S:\300 Drawings\CAD\		
DRAIN. REF.	3384543-CE-035.dwg				
SAP WBS	PRINTED ON 12-Jun-15 BY DLM1				

<b>APPROVED</b>	
FOR TENDER	
DATE	SIGNED
FOR CONSTRUCTION	
DATE	SIGNED

CONSULTANT

**Beca** **OPUS**

CONSULTANT PROJECT REF. 3384543 / 3C1262.00

CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

**DUDLEY CREEK FLOOD REMEDIATION**

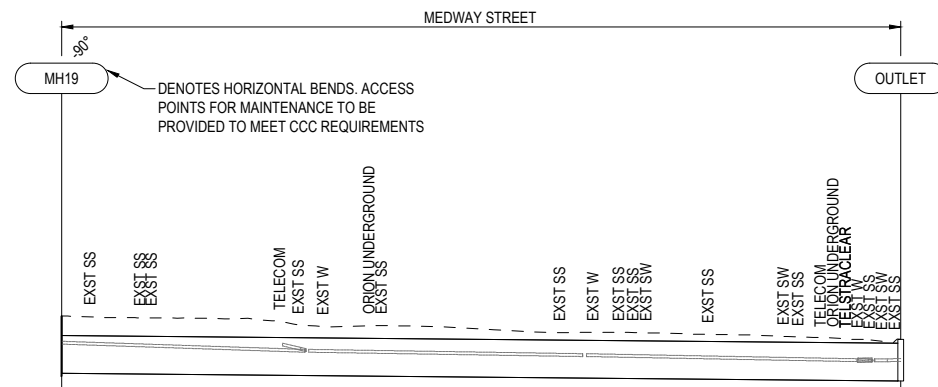
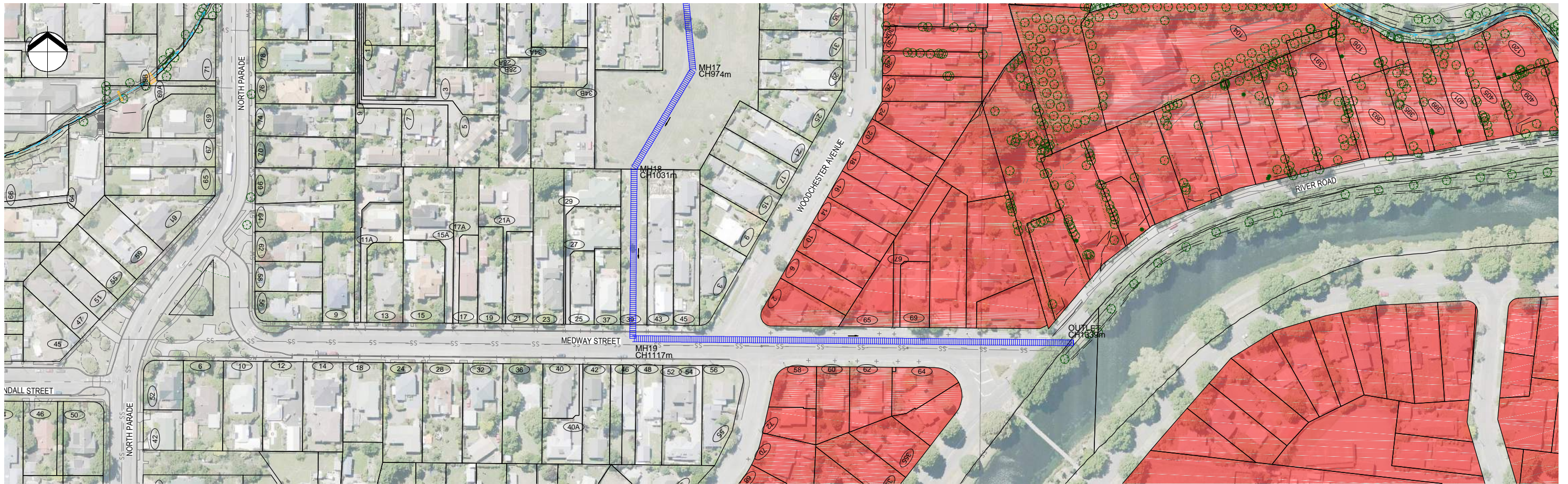
DRAWING TITLE

**OPTION B4 LONG SECTION (PUMPED)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-035				
CPG PROJECT FILE NUMBER	CP502630	SHEET	2	OF	3

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DATUM R.L. (m)	3.0		
LID LEVEL	12.24		11.00
INVERT LEVEL	9.20	9.20	8.80
DEPTH TO INVERT	3.04		2.20
PIPE SIZE		2000mm	
GRADE		0.18%	
CHAINAGE	1117.3	222.02m	1339.4

SW LINE OPTION B4

**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- (81) PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- CERA REDZONE PROPERTY
- PROPOSED BYPASS PIPE

**NOTES**

- PIPE TYPE REFERS TO A DN2000 PE100 PN 6.3 AS PER DETAIL B ON DRAWING 3384543-CE-060.

**ORIGINAL DRAWING  
IN COLOUR**

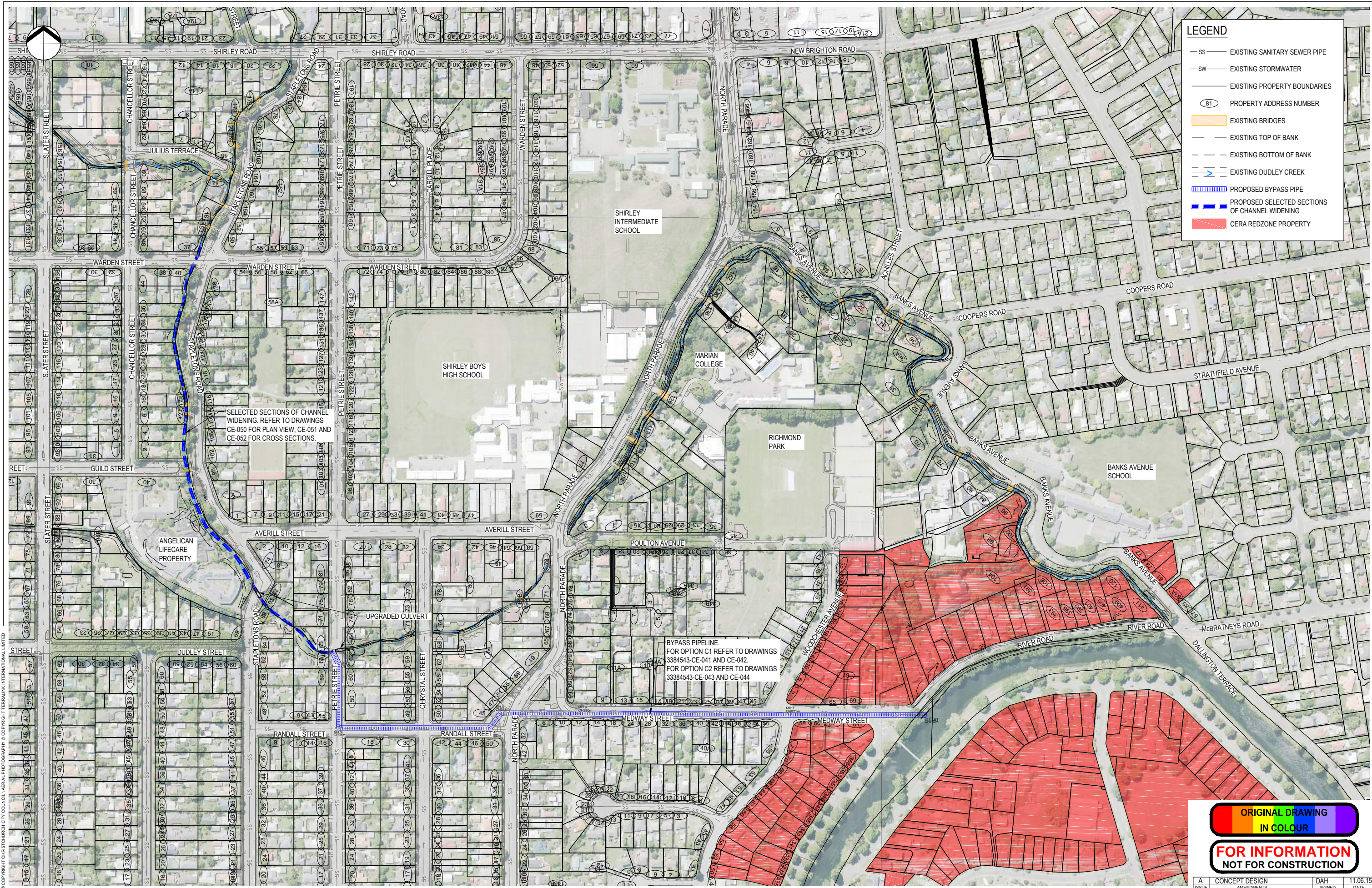
**FOR INFORMATION  
NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

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<p><b>Christchurch City Council</b> CAPITAL PROGRAMME GROUP</p>	<table border="1"> <tr> <th>DATUM</th> <th>NAME</th> <th>SIGNED</th> <th>DATE</th> </tr> <tr> <td>BENCH MK.</td> <td>DESIGNED</td> <td>DJG</td> <td>DJG 06.2015</td> </tr> <tr> <td>RL</td> <td>DES. REVIEW</td> <td>DAH</td> <td>DAH 06.2015</td> </tr> <tr> <td>SURVEY</td> <td>DRAWN</td> <td>DLM</td> <td>DLM 06.2015</td> </tr> <tr> <td>SURVEY LB</td> <td>DRW. CHECK</td> <td>DJG</td> <td>DJG 06.2015</td> </tr> <tr> <td></td> <td>FILE LOCATION</td> <td colspan="2">S:\300 Drawings\CAD\</td> </tr> <tr> <td>DRAIN. REF.</td> <td colspan="3">3384543-CE-036.dwg</td> </tr> <tr> <td>SAP WBS</td> <td colspan="3">PRINTED ON 11-Jun-15 BY DLM1</td> </tr> </table>	DATUM	NAME	SIGNED	DATE	BENCH MK.	DESIGNED	DJG	DJG 06.2015	RL	DES. REVIEW	DAH	DAH 06.2015	SURVEY	DRAWN	DLM	DLM 06.2015	SURVEY LB	DRW. CHECK	DJG	DJG 06.2015		FILE LOCATION	S:\300 Drawings\CAD\		DRAIN. REF.	3384543-CE-036.dwg			SAP WBS	PRINTED ON 11-Jun-15 BY DLM1			<table border="1"> <tr> <th colspan="2">APPROVED</th> </tr> <tr> <td>FOR TENDER</td> <td></td> </tr> <tr> <td>DATE</td> <td>SIGNED</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <th colspan="2">FOR CONSTRUCTION</th> </tr> <tr> <td>DATE</td> <td>SIGNED</td> </tr> <tr> <td></td> <td></td> </tr> </table>	APPROVED		FOR TENDER		DATE	SIGNED			FOR CONSTRUCTION		DATE	SIGNED				<p>PROJECT TITLE</p> <p style="text-align: center;"><b>DUDLEY CREEK FLOOD REMEDIATION</b></p>	<p>DRAWING TITLE</p> <p style="text-align: center;"><b>OPTION B4 LONG SECTION (PUMPED)</b></p>	<table border="1"> <tr> <td>CONTRACT NUMBER</td> <td>14/15-192</td> <td>ORIGINAL SHEET SIZE</td> <td>A1</td> <td>SCALES</td> <td>1:1000 @ A1</td> </tr> <tr> <td>CAD DRAWING FILE REF.</td> <td>3384543-CE-036</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CPG PROJECT FILE NUMBER</td> <td>CP502630</td> <td></td> <td></td> <td>SHEET</td> <td>3 OF 3</td> </tr> </table>	CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1	CAD DRAWING FILE REF.	3384543-CE-036					CPG PROJECT FILE NUMBER	CP502630			SHEET	3 OF 3
	DATUM	NAME	SIGNED	DATE																																																																		
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RL	DES. REVIEW	DAH	DAH 06.2015																																																																			
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<p>FILE LOCATION</p> <p>S:\300 Drawings\CAD\</p>		<p>DATE</p> <p>SIGNED</p>		<p>CONSULTANT PROJECT REF.</p> <p>3384543 / 3C1262.00</p> <p>CONSULTANT FILE REF.</p> <p>S:\300 Drawings\CAD</p>		<p>PROJECT TITLE</p> <p>DUDLEY CREEK FLOOD REMEDIATION</p>		<p>DRAWING TITLE</p> <p>OPTION B4 LONG SECTION (PUMPED)</p>		<p>CONTRACT NUMBER</p> <p>14/15-192</p> <p>ORIGINAL SHEET SIZE</p> <p>A1</p> <p>SCALES</p> <p>1:1000 @ A1</p> <p>CAD DRAWING FILE REF.</p> <p>3384543-CE-036</p> <p>CPG PROJECT FILE NUMBER</p> <p>CP502630</p> <p>SHEET</p> <p>3 OF 3</p>																																																												





**LEGEND**

- SS — EXISTING SANITARY SEWER PIPE
- SW — EXISTING STORMWATER
- — EXISTING PROPERTY BOUNDARIES
- ⊙ 81 ⊙ PROPERTY ADDRESS NUMBER
- — EXISTING BRIDGES
- — EXISTING TOP OF BANK
- — EXISTING BOTTOM OF BANK
- — EXISTING DUDLEY CREEK
- ▬▬▬▬▬▬ PROPOSED BYPASS PIPE
- ▬▬▬▬▬▬ PROPOSED SELECTED SECTIONS OF CHANNEL WIDENING
- CERA REDZONE PROPERTY

SELECTED SECTIONS OF CHANNEL WIDENING. REFER TO DRAWINGS CE-050 FOR PLAN VIEW, CE-051 AND CE-052 FOR CROSS SECTIONS.

BYPASS PIPELINE. FOR OPTION C1 REFER TO DRAWINGS 3384543-CE-041 AND CE-042. FOR OPTION C2 REFER TO DRAWINGS 3384543-CE-043 AND CE-044

ORIGINAL DRAWING IN COLOUR

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A	CONCEPT DESIGN	DAH	11.06.15
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**Christchurch City Council**  
CAPITAL PROGRAMME GROUP

DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE
RL		DESIGN REVIEW	DJG	DJG	06.2015
SURVEY		DRAWN	DLM	DLM	06.2015
SURVEY LB		DRW. CHECK	DJG	DJG	06.2015
DRAIN. REF.	3384543-CE-040.dwg	FILE LOCATION	S:\300 Drawings\CAD\		
SAP WBS	PRINTED ON 12-Jun-15 BY DLM1				

**APPROVED**

FOR TENDER	DATE	SIGNED
FOR CONSTRUCTION	DATE	SIGNED

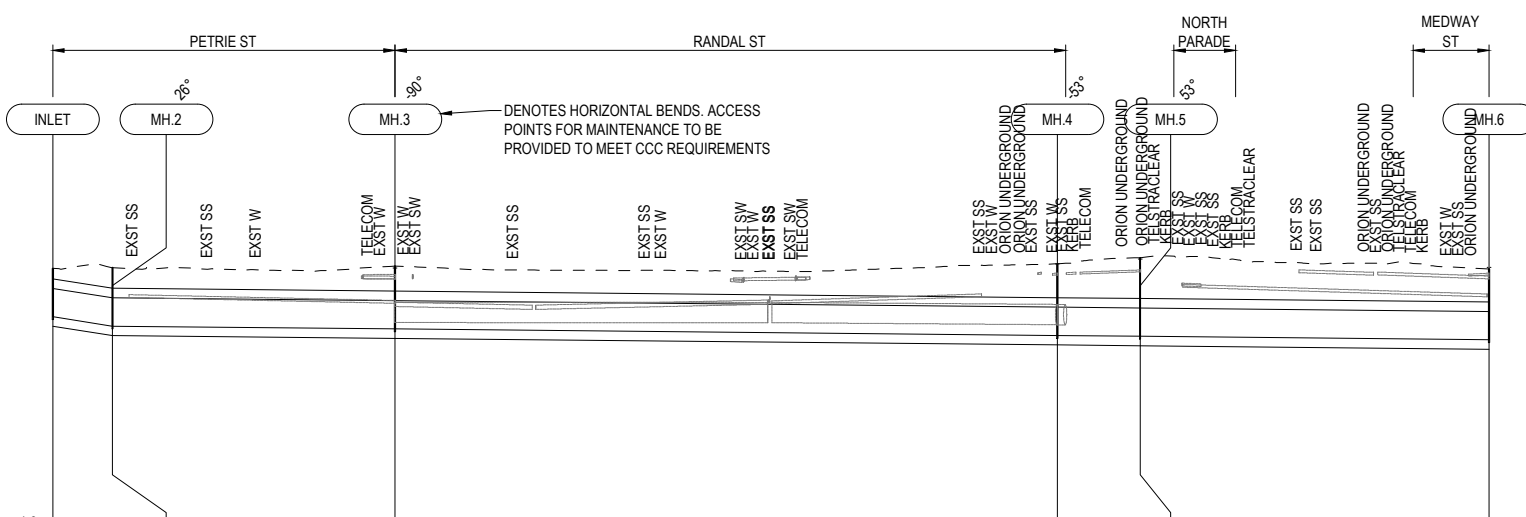
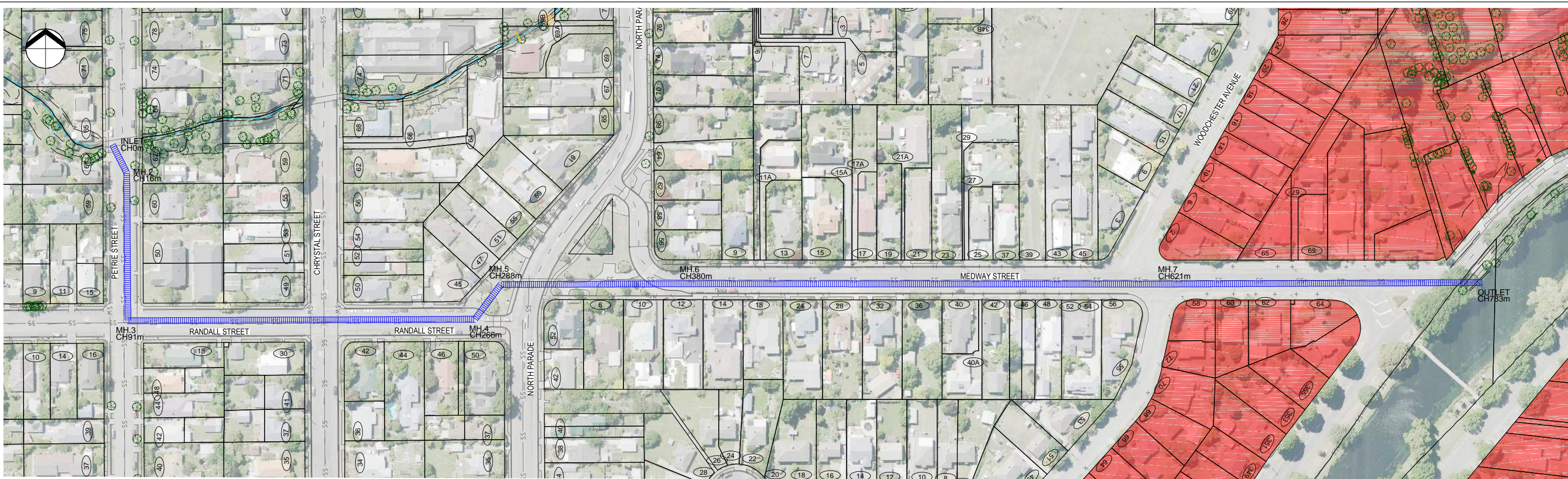
CONSULTANT	<b>Beca</b> <b>OPUS</b>
CONSULTANT PROJECT REF.	3384543 / 3C1262.00
CONSULTANT FILE REF.	S:\300 Drawings\CAD

PROJECT TITLE  
**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE  
**OPTION C - C1 (GRAVITY) AND C2 (PUMPED)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:2000 @ A1
CAD DRAWING FILE REF.	3384543-CE-040	CPG PROJECT FILE NUMBER	CP502630	SHEET	1 OF 1





**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
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- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- - - EXISTING BOTTOM OF BANK
- CERA REDZONE PROPERTY
- PROPOSED BYPASS PIPE

**NOTES**

- PIPE TYPE REFERS TO A 4.0m WIDE x 1.5m HIGH BOX CULVERT AS PER DETAIL A ON DRAWING 3384543-CE-050.

DATUM RL (m)	-1.0	
LID LEVEL	12.92	12.97
INVERT LEVEL	10.36	9.87
DEPTH TO INVERT	2.56	3.10
PIPE SIZE	4000x1500mm	4000x1500mm
GRADE	3.13%	0.2%
CHAINAGE	0.0	15.8

DATUM RL (m)	-1.0	
LID LEVEL	13.04	13.17
INVERT LEVEL	9.72	9.37
DEPTH TO INVERT	3.32	3.80
PIPE SIZE	4000x1500mm	4000x1500mm
GRADE	0.2%	0.19%
CHAINAGE	90.5	265.8

DATUM RL (m)	-1.0	
LID LEVEL	13.48	12.89
INVERT LEVEL	9.33	9.14
DEPTH TO INVERT	4.16	3.75
PIPE SIZE	4000x1500mm	4000x1500mm
GRADE	0.2%	
CHAINAGE	287.7	380.0

SW LINE OPTION D1

**ORIGINAL DRAWING  
IN COLOUR**

**FOR INFORMATION  
NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	SIGNED	11.06.15
ISSUE	AMENDMENTS	DATE	



DATUM	DESIGNED	NAME	SIGNED	DATE	APPROVED
BENCH MK.	DJG	DJG	DJG	06.2015	FOR TENDER
RL	DAH	DAH	DAH	06.2015	DATE
SURVEY	DLM	DLM	DLM	06.2015	SIGNED
SURVEY LB	DJG	DJG	DJG	06.2015	FOR CONSTRUCTION
	DJG	DJG	DJG	06.2015	DATE
	DJG	DJG	DJG	06.2015	SIGNED

CONSULTANT

**Beca** **OPUS**

CONSULTANT PROJECT REF. 3384543 / 3C1262.00

CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

**DUDLEY CREEK FLOOD REMEDIATION**

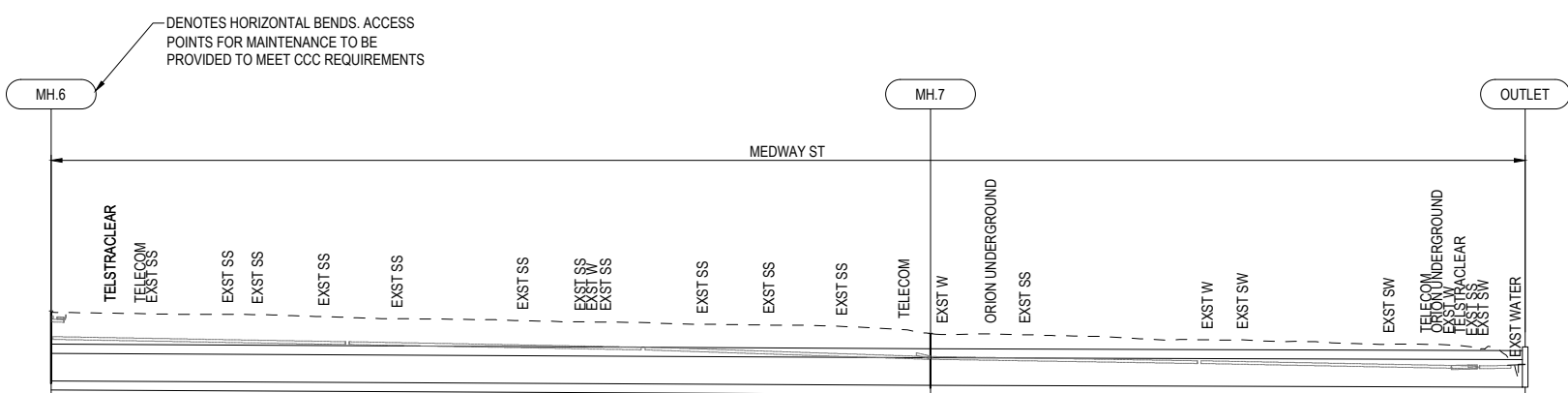
DRAWING TITLE

**OPTION C1 LONG SECTION  
(GRAVITY)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-041				
CPG PROJECT FILE NUMBER	CP502630	SHEET	1	OF	2

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**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- (81) PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- CERA REDZONE PROPERTY
- PROPOSED BYPASS PIPE

**NOTES**

- PIPE TYPE REFERS TO A 4.0m WIDE x 1.5m HIGH BOX CULVERT AS PER DETAIL A ON DRAWING 3384543-CE-050.

DATUM RL. (m)	3.0		
LID LEVEL	12.89		
INVERT LEVEL	9.14	8.90	8.80
DEPTH TO INVERT	3.75	2.83	2.20
PIPE SIZE		4000x1500mm	4000x1500mm
GRADE		0.1%	0.06%
CHAINAGE	380.0	620.6	783.2

SW LINE OPTION D1

ORIGINAL DRAWING  
IN COLOUR  
**FOR INFORMATION  
NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE



DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE
RL	SURVEY	DRAWN	DLM	DLM	06.2015
SURVEY LB	DRW. CHECK	DJG	DJG	DJG	06.2015
DRAIN. REF.	SAP WBS	PRINTED ON	11-Jun-15 BY DLM1		

APPROVED	FOR TENDER
DATE	SIGNED
APPROVED	FOR CONSTRUCTION
DATE	SIGNED

CONSULTANT	Beca	OPUS
CONSULTANT PROJECT REF.	3384543 / 3C1262.00	
CONSULTANT FILE REF.	S:\300 Drawings\CAD	

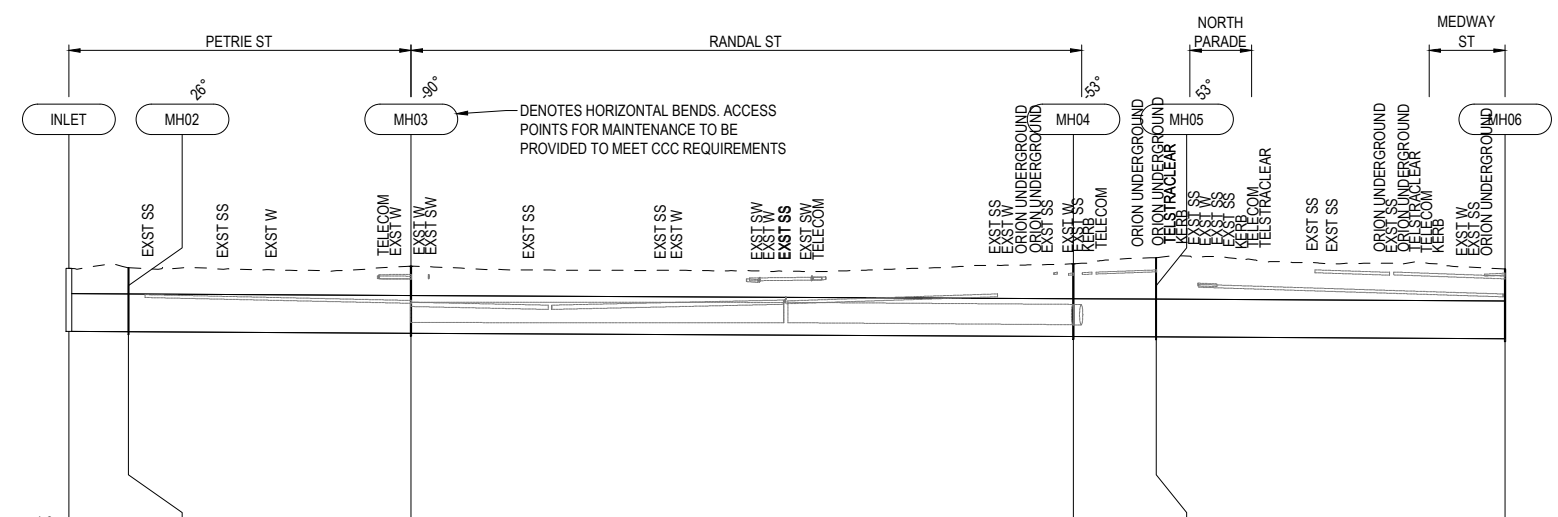
PROJECT TITLE  
**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE  
**OPTION C1 LONG SECTION  
(GRAVITY)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-042	CPG PROJECT FILE NUMBER	CP502630	SHEET	2 OF 2

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DATUM R.L. (m)	-1.0											
LID LEVEL	12.91	12.95	13.04	13.17	13.48	12.89						
INVERT LEVEL	9.58	9.56	9.49	9.32	9.29	9.20						
DEPTH TO INVERT	3.33	3.39	3.55	3.85	4.19	3.69						
PIPE SIZE	2000mm	2000mm	2000mm	2000mm	2000mm	2000mm						
GRADE	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%						
CHAINAGE	0.0	15.80m	15.8	74.74m	90.5	175.25m	265.8	21.90m	287.7	92.33m	380.0	

SW LINE OPTION D2

**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- 81 — PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- CERA REDZONE PROPERTY
- PROPOSED BYPASS PIPE

**NOTES**

- PIPE TYPE REFERS TO A DN2000 PE100 PN 6.3 AS PER DETAIL B ON DRAWING 3384543-CE-060.

ORIGINAL DRAWING  
IN COLOUR  
**FOR INFORMATION  
NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

**Christchurch City Council**  
CAPITAL PROGRAMME GROUP

DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE	APPROVED
RL	DES. REVIEW	DAH	DAH	06.2015	FOR TENDER	
SURVEY	DRAWN	DLM	DLM	06.2015	DATE	SIGNED
SURVEY LB	DRW. CHECK	DJG	DJG	06.2015	FOR CONSTRUCTION	
	FILE LOCATION	S:\300 Drawings\CAD\		DATE	SIGNED	
DRAIN. REF.	3384543-CE-043.dwg			DATE	SIGNED	
SAP WBS	PRINTED ON 11-Jun-15 BY DLM1			DATE	SIGNED	

CONSULTANT

**Beca** **OPUS**

CONSULTANT PROJECT REF. 3384543 / 3C1262.00

CONSULTANT FILE REF. S:\300 Drawings\CAD

PROJECT TITLE

**DUDLEY CREEK FLOOD REMEDIATION**

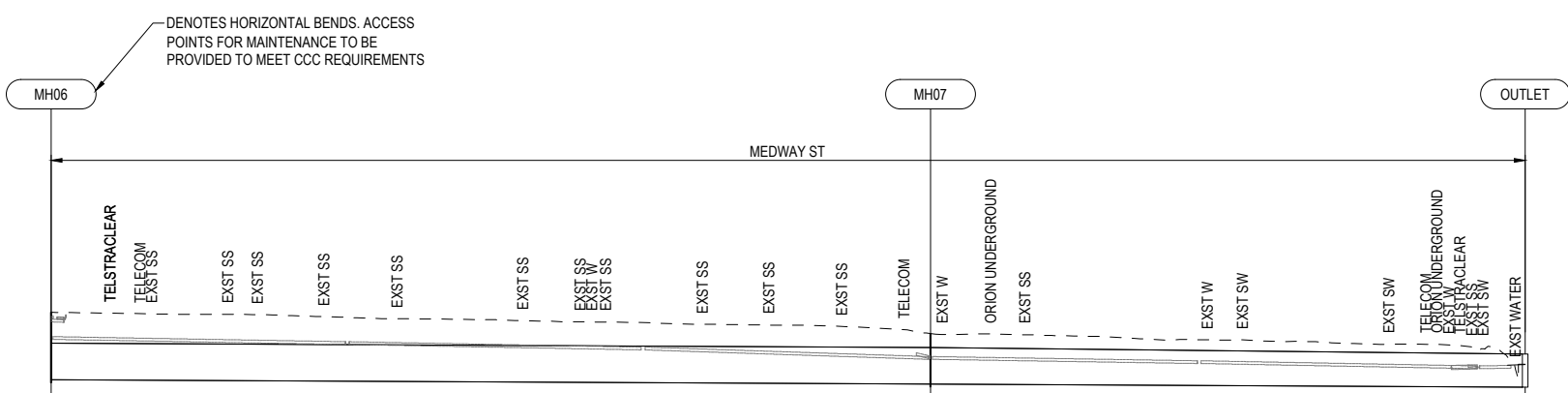
DRAWING TITLE

**OPTION C2 LONG SECTION  
(PUMPED)**

CONTRACT NUMBER	14/15-192	ORIGINAL SHEET SIZE	A1	SCALES	1:1000 @ A1
CAD DRAWING FILE REF.	3384543-CE-043				
CPG PROJECT FILE NUMBER	CP502630	SHEET	1	OF	2

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DATUM RL. (m)	3.0		
LID LEVEL	12.89		
INVERT LEVEL	9.20	8.96	8.80
DEPTH TO INVERT	3.69		1.80
PIPE SIZE		2000mm	2000mm
GRADE		0.1%	0.1%
CHAINAGE	380.0	240.54m	162.69m

SW LINE OPTION D2

**LEGEND**

- EXISTING PROPERTY BOUNDARIES
- SW — EXISTING STORMWATER PIPE
- SS — EXISTING SANITARY SEWER PIPE
- EXISTING STORMWATER OR SANITARY SEWER (LONG SECTION)
- (81) PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- EXISTING DUDLEY CREEK
- EXISTING TREE
- EXISTING TOP OF BANK
- EXISTING BOTTOM OF BANK
- CERA REDZONE PROPERTY
- PROPOSED BYPASS PIPE

**NOTES**

1. PIPE TYPE REFERS TO A DN2000 PE100 PN 6.3 AS PER DETAIL B ON DRAWING 3384543-CE-060.

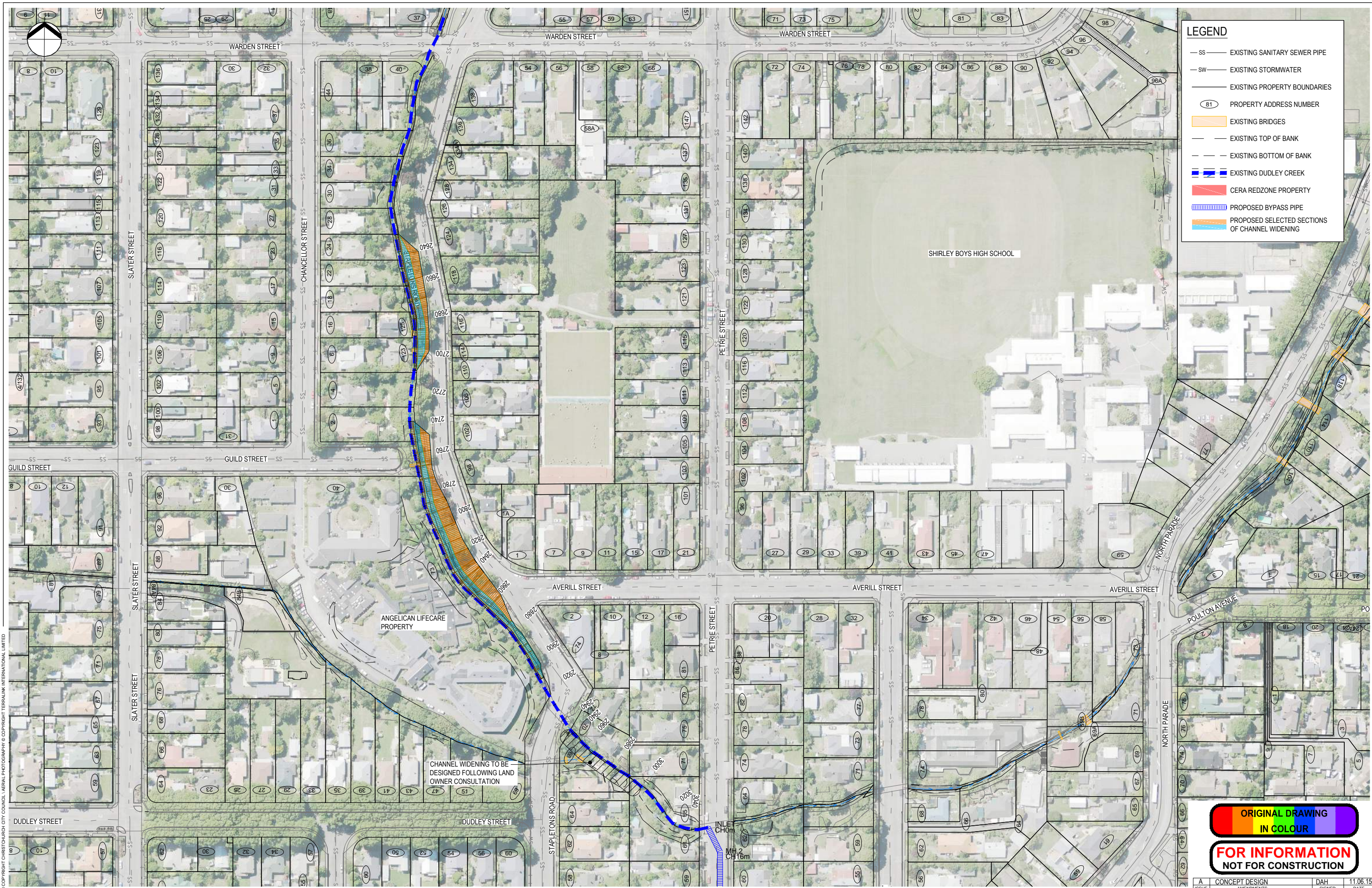
**ORIGINAL DRAWING  
IN COLOUR**

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<p>Christchurch City Council CAPITAL PROGRAMME GROUP</p>	<table border="1"> <tr><th>DATUM</th><th>BENCH MK.</th><th>DESIGNED</th><th>NAME</th><th>SIGNED</th><th>DATE</th></tr> <tr><td>RL</td><td></td><td>DAH</td><td>DJG</td><td>DJG</td><td>06.2015</td></tr> <tr><td>SURVEY</td><td></td><td>DLM</td><td>DLM</td><td>DLM</td><td>06.2015</td></tr> <tr><td>SURVEY LB</td><td></td><td>DJG</td><td>DJG</td><td>DJG</td><td>06.2015</td></tr> <tr><td>FILE LOCATION</td><td colspan="5">S:\300 Drawings\CAD\</td></tr> <tr><td>DRAIN. REF.</td><td colspan="5">3384543-CE-044.dwg</td></tr> <tr><td>SAP WBS</td><td colspan="5">PRINTED ON 11-Jun-15 BY DLM1</td></tr> </table>	DATUM	BENCH MK.	DESIGNED	NAME	SIGNED	DATE	RL		DAH	DJG	DJG	06.2015	SURVEY		DLM	DLM	DLM	06.2015	SURVEY LB		DJG	DJG	DJG	06.2015	FILE LOCATION	S:\300 Drawings\CAD\					DRAIN. REF.	3384543-CE-044.dwg					SAP WBS	PRINTED ON 11-Jun-15 BY DLM1					<table border="1"> <tr><th colspan="2">APPROVED</th></tr> <tr><td>FOR TENDER</td><td></td></tr> <tr><td>DATE</td><td>SIGNED</td></tr> <tr><td>FOR CONSTRUCTION</td><td></td></tr> <tr><td>DATE</td><td>SIGNED</td></tr> </table>	APPROVED		FOR TENDER		DATE	SIGNED	FOR CONSTRUCTION		DATE	SIGNED	<table border="1"> <tr><th>CONSULTANT</th></tr> <tr><td></td></tr> <tr><th>CONSULTANT PROJECT REF.</th></tr> <tr><td>3384543 / 3C1262.00</td></tr> <tr><th>CONSULTANT FILE REF.</th></tr> <tr><td>S:\300 Drawings\CAD</td></tr> </table>	CONSULTANT		CONSULTANT PROJECT REF.	3384543 / 3C1262.00	CONSULTANT FILE REF.	S:\300 Drawings\CAD	<p><b>DUDLEY CREEK FLOOD REMEDIATION</b></p>	<p><b>OPTION C2 LONG SECTION (PUMPED)</b></p>	<table border="1"> <tr><th>CONTRACT NUMBER</th><th>ORIGINAL SHEET SIZE</th><th>SCALES</th></tr> <tr><td>14/15-192</td><td>A1</td><td>1:1000 @ A1</td></tr> <tr><th>CAD DRAWING FILE REF.</th><th colspan="2">SHEET</th></tr> <tr><td>3384543-CE-044</td><td colspan="2">2 OF 2</td></tr> <tr><th>CPG PROJECT FILE NUMBER</th><td colspan="2">CP502630</td></tr> </table>	CONTRACT NUMBER	ORIGINAL SHEET SIZE	SCALES	14/15-192	A1	1:1000 @ A1	CAD DRAWING FILE REF.	SHEET		3384543-CE-044	2 OF 2		CPG PROJECT FILE NUMBER	CP502630	
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		SIGNED	DATE																																																																												





**LEGEND**

- SS — EXISTING SANITARY SEWER PIPE
- SW — EXISTING STORMWATER
- — EXISTING PROPERTY BOUNDARIES
- (81) PROPERTY ADDRESS NUMBER
- EXISTING BRIDGES
- — EXISTING TOP OF BANK
- — EXISTING BOTTOM OF BANK
- EXISTING DUDLEY CREEK
- CERA REDZONE PROPERTY
- PROPOSED BYPASS PIPE
- PROPOSED SELECTED SECTIONS OF CHANNEL WIDENING

**ORIGINAL DRAWING  
IN COLOUR**  
**FOR INFORMATION  
NOT FOR CONSTRUCTION**

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

**Christchurch City Council**  
 CAPITAL PROGRAMME GROUP

DATUM	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	DJG	DJG	DJG	06.2015
RL	DES. REVIEW	DAH	DAH	06.2015
SURVEY	DRAWN	DLM	DLM	06.2015
SURVEY LB	DRW. CHECK	DJG	DJG	06.2015
DRAIN. REF.	FILE LOCATION	S:\300 Drawings\CAD\		
SAP WBS	PRINTED ON	12-Jun-15 BY DLM1		

**APPROVED**

FOR TENDER	DATE	SIGNED
FOR CONSTRUCTION	DATE	SIGNED

CONSULTANT: **Beca** **OPUS**

CONSULTANT PROJECT REF: 3384543 / 3C1262.00  
 CONSULTANT FILE REF: S:\300 Drawings\CAD

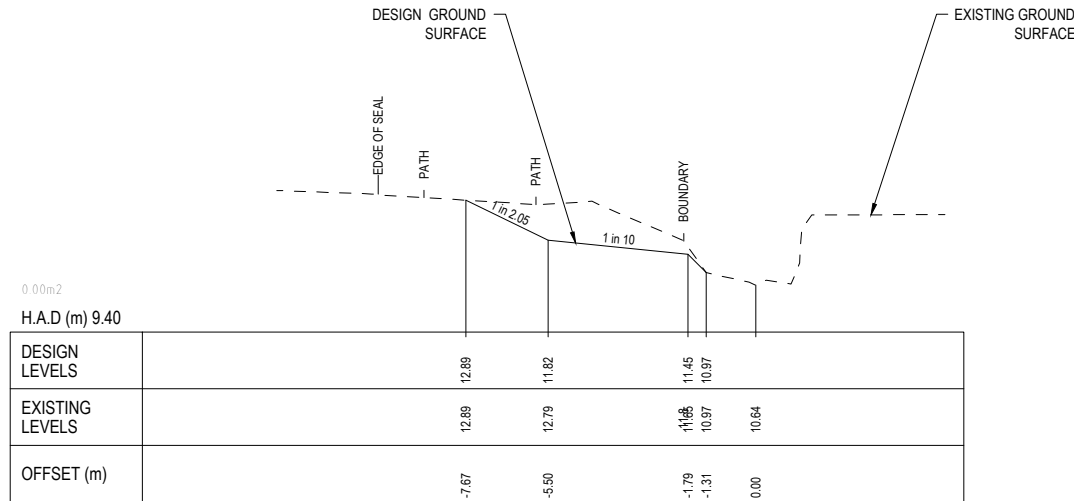
**DUDLEY CREEK FLOOD REMEDIATION**

**OPTION C - STAPLETONS ROAD**

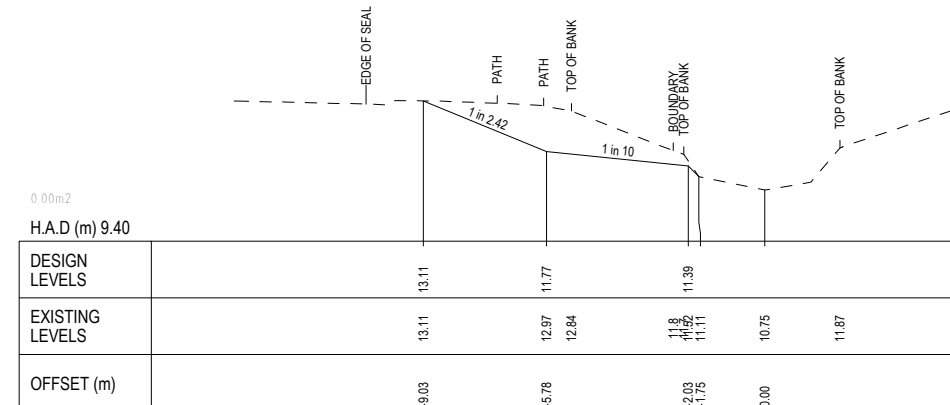
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14/15-192	A1	1:1000 @ A1
CAD DRAWING FILE REF.	SHEET	
3384543-CE-050	1 OF 1	
CPG PROJECT FILE NUMBER	CP502630	



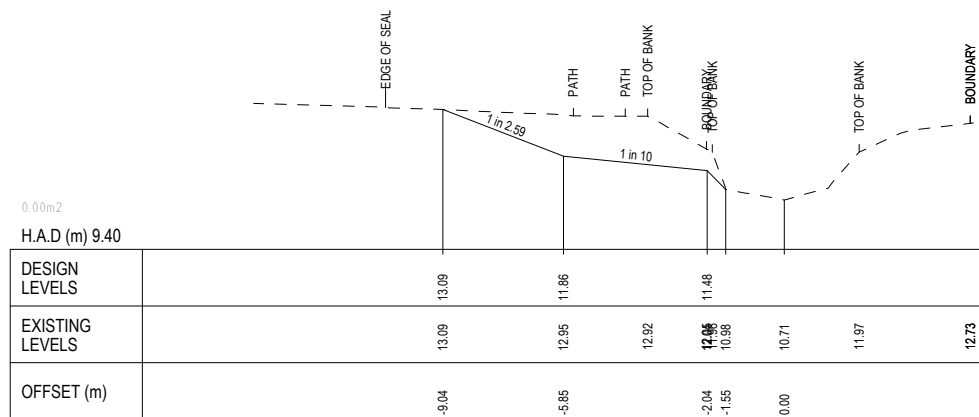
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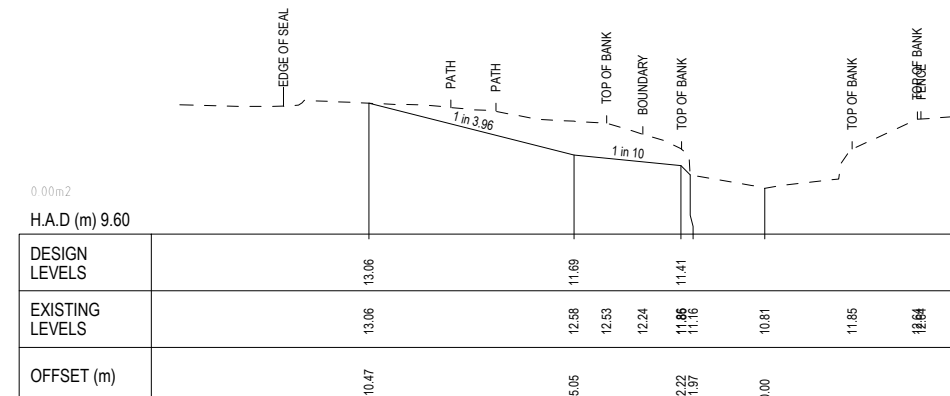
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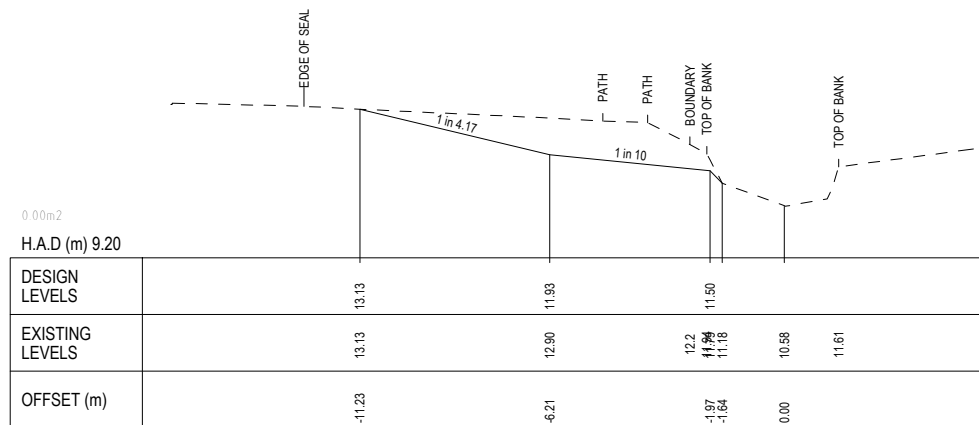
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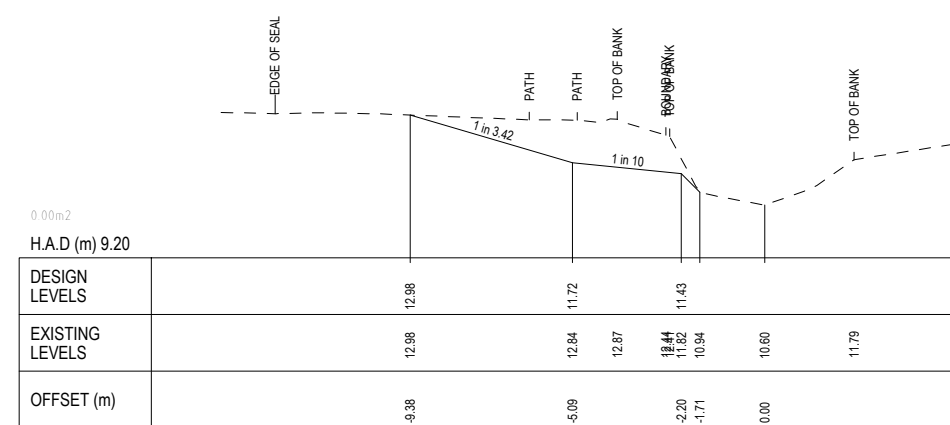
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2650.00



2725.00

ORIGINAL DRAWING  
IN COLOUR

FOR INFORMATION  
NOT FOR CONSTRUCTION

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

DATUM	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	DJG	DJG	DJG	06.2015
RL	DAH	DAH	DAH	06.2015
SURVEY	DLM	DLM	DLM	06.2015
SURVEY LB	DJG	DJG	DJG	06.2015

APPROVED	
FOR TENDER	
DATE	SIGNED
FOR CONSTRUCTION	
DATE	SIGNED

CONSULTANT	<b>Beca</b> <b>OPUS</b>
CONSULTANT PROJECT REF.	3384543 / 3C1262.00
CONSULTANT FILE REF.	S:\300 Drawings\CAD

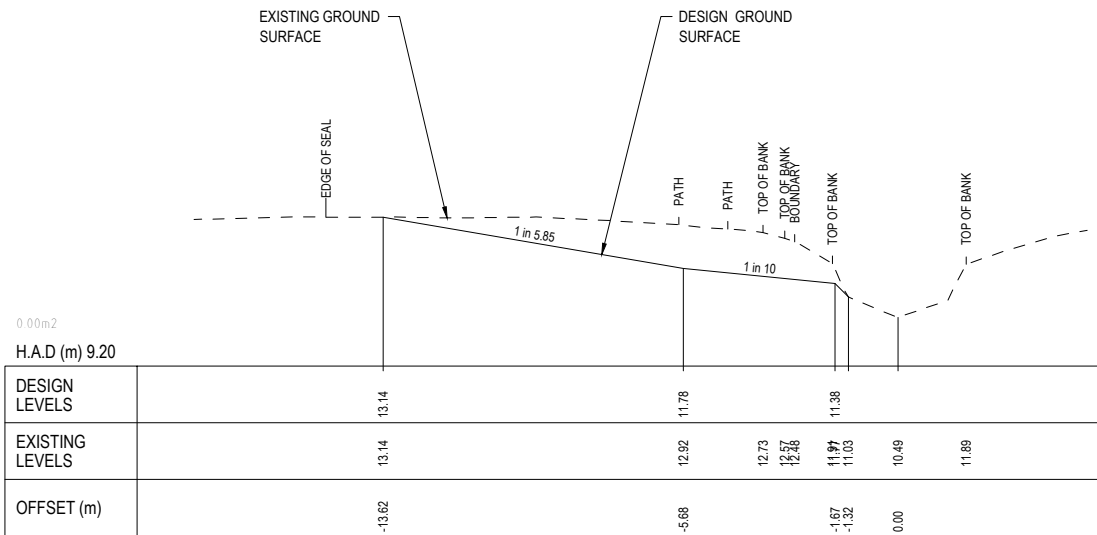
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**DUDLEY CREEK FLOOD REMEDIATION**

DRAWING TITLE  
**OPTION C - STAPLETONS ROAD  
CROSS SECTIONS**

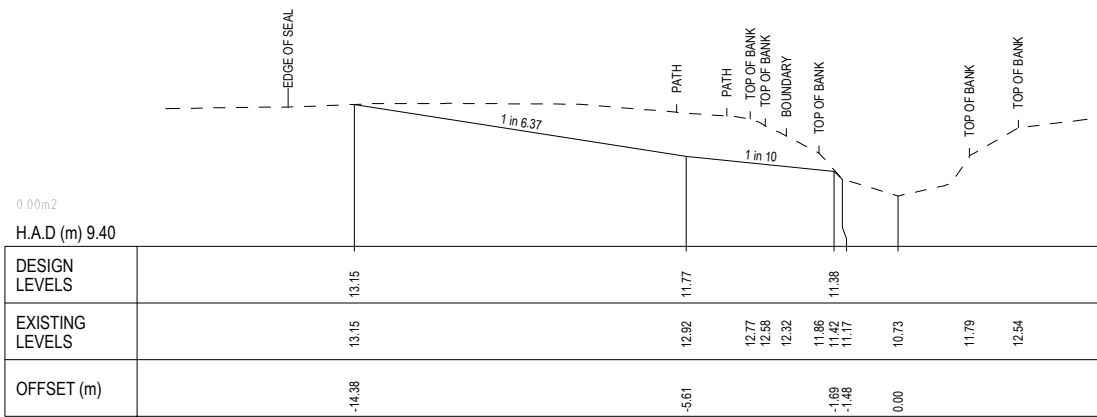
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CAD DRAWING FILE REF.	3384543-CE-051	CPG PROJECT FILE NUMBER	CP502630	SHEET	1 OF 2



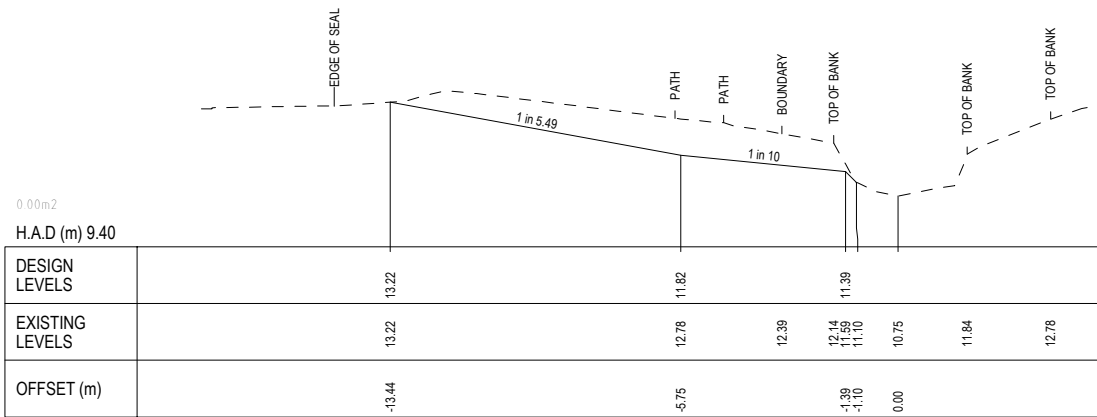
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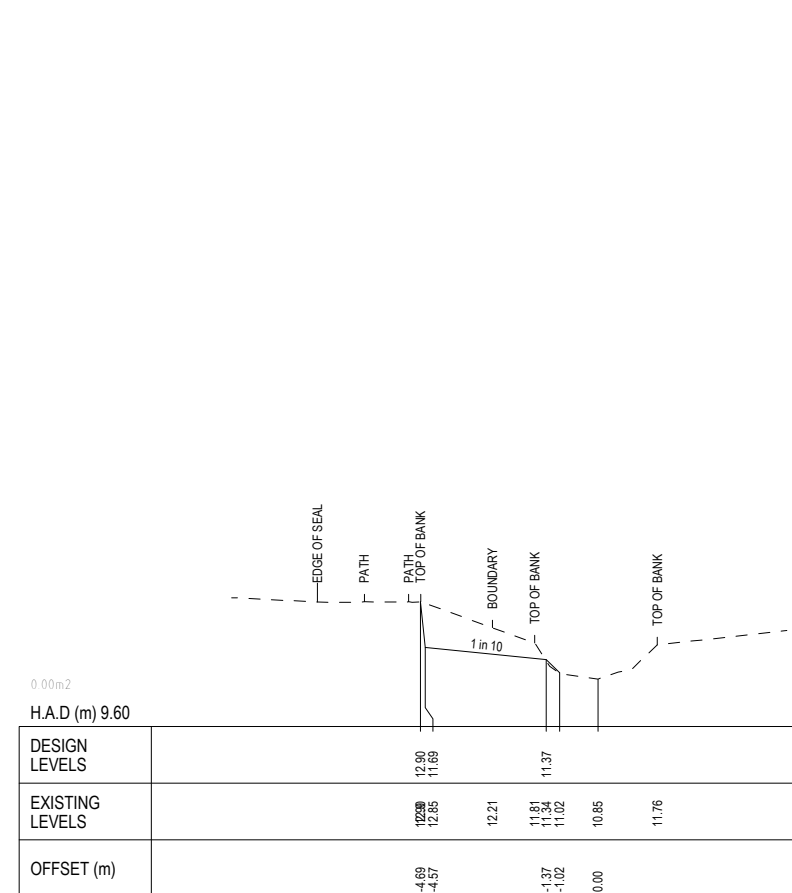
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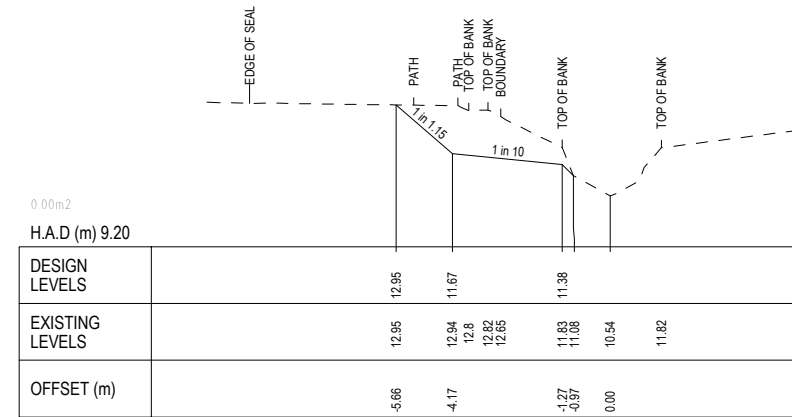
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2800.00



2900.00



2875.00

ORIGINAL DRAWING  
IN COLOUR

FOR INFORMATION  
NOT FOR CONSTRUCTION

A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE



DATUM	DESIGNED	NAME	SIGNED	DATE
BENCH MK.	DJG	DJG	DJG	06.2015
RL	DAH	DAH	DAH	06.2015
SURVEY	DLM	DLM	DLM	06.2015
SURVEY LB	DJG	DJG	DJG	06.2015
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DRAIN REF.	3384543-CE-052.dwg			
SAP WBS	PRINTED ON 12-Jun-15 BY DLM1			

APPROVED		CONSULTANT	
FOR TENDER		Beca	OPUS
DATE	SIGNED	CONSULTANT PROJECT REF. 3384543 / 3C1262.00	
FOR CONSTRUCTION		CONSULTANT FILE REF. S:\300 Drawings\CAD	
DATE	SIGNED		

PROJECT TITLE  
**DUDLEY CREEK FLOOD REMEDIATION**

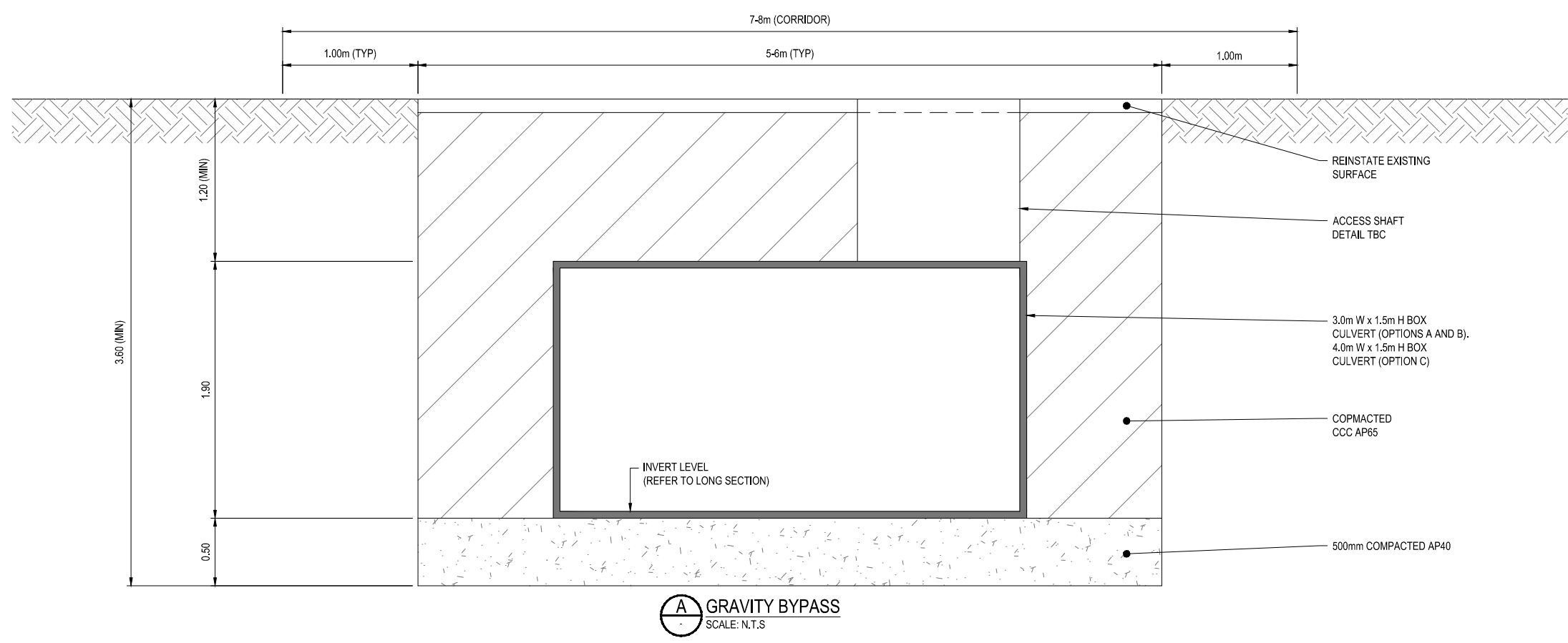
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**OPTION C - STAPLETONS ROAD  
CROSS SECTIONS**

CONTRACT NUMBER 14/15-192	ORIGINAL SHEET SIZE A1	SCALES 1:100 H @ A1 1:1 V @ A1
CAD DRAWING FILE REF. 3384543-CE-052	CPG PROJECT FILE NUMBER CP502630	SHEET 2 OF 2



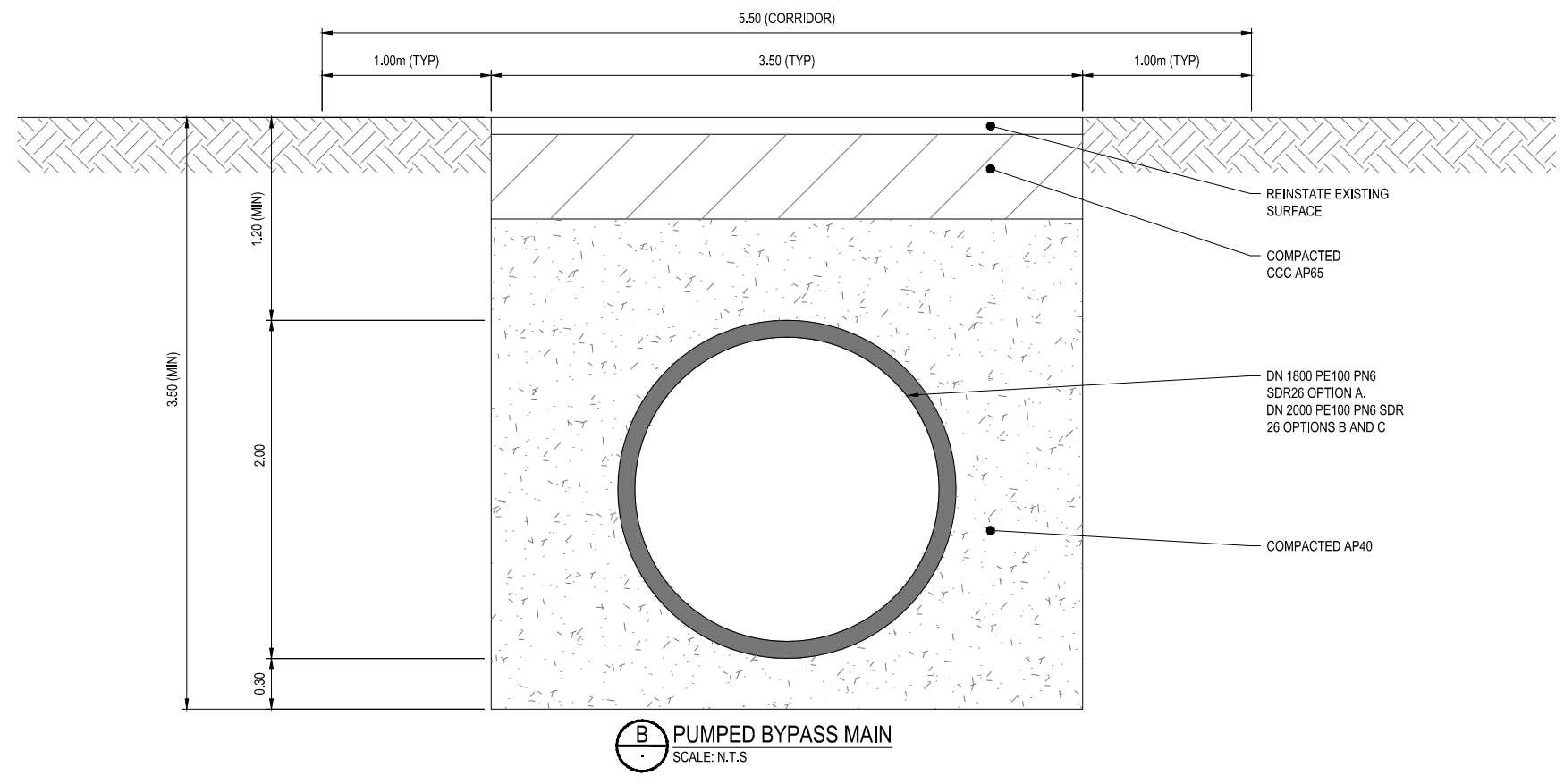
**NOTES**

- 1. THE 1.0m EXTENTS ON EITHER SIDE IS WORKING ROOM TO THE NEAREST SERVICES.



**NOTES**

- 1. THE 1.0m EXTENTS ON EITHER SIDE IS WORKING ROOM TO THE NEAREST SERVICES.



**ORIGINAL DRAWING  
IN COLOUR**

**FOR INFORMATION  
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A	CONCEPT DESIGN	DAH	11.06.15
ISSUE	AMENDMENTS	SIGNED	DATE

DATUM	NAME	SIGNED	DATE
BENCH MK.	DESIGNED	DJG	06.2015
RL	DES. REVIEW	DAH	06.2015
SURVEY	DRAWN	DLM	06.2015
SURVEY LB	DRW. CHECK	DJG	06.2015
	FILE LOCATION	S:\300 Drawings\CAD\	
DRAIN. REF.	3384543-CE-060.dwg		
SAP WBS	PRINTED ON 11-Jun-15 BY DLM1		

APPROVED		CONSULTANT
FOR TENDER	DATE	
DATE	SIGNED	
FOR CONSTRUCTION	DATE	CONSULTANT PROJECT REF.
DATE	SIGNED	CONSULTANT FILE REF.
		3384543 / 3C1262.00
		S:\300 Drawings\CAD

CONTRACT NUMBER	ORIGINAL SHEET SIZE	SCALES
14/15-192	A1	AS SHOWN
CAD DRAWING FILE REF.	SHEET	
3384543-CE-060	1 OF 1	
CPG PROJECT FILE NUMBER		
CP502630		

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