

PUKAKI IRRIGATION COMPANY LTD.
EVIDENCE FOR RESOURCE CONSENT HEARING FOR 3 CUMEC CONVEYANCE OPTIONS
DRAWING INDEX
OCTOBER 2009

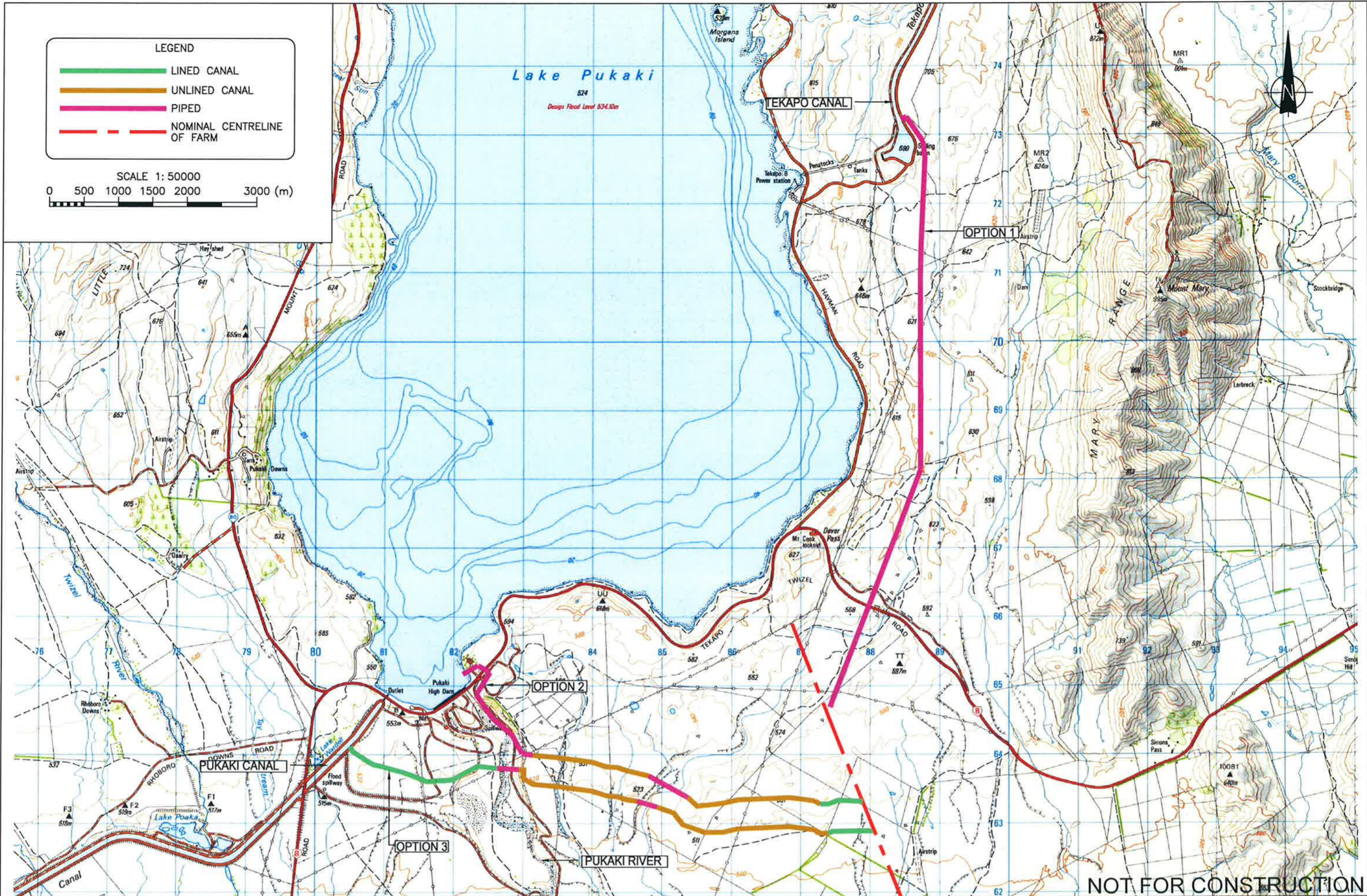
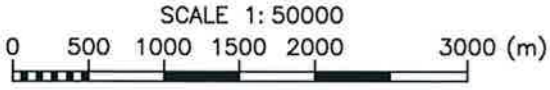
DRAWING NUMBER	DRAWING NAME	DRAWING REVISION
05805/3-01	OVERVIEW PLAN	0
OPTION 1		
05805/3-08	SIPHON INTAKE SECTION	0
OPTION 2		
05805/3-AUG-1	INTAKE CONCEPT DRAWING PLAN	0
05805/3-JUL-2	INTAKE DETAIL	0
OPTION 3		
05805/3-JUN-1	INTAKE CONCEPT DRAWING PLAN	2
05805/3-JUN-2	INTAKE SECTION	2
05805/1-05	TYPICAL CANAL CROSS SECTIONS	0
SH8 PIPELINE CROSSING		
05805/4-01	CONCEPTUAL PIPELINE CROSSING PLAN	1
05805/4-02	CONCEPTUAL PLAN OF CULVERT CROSSING	1
05805/4-03	CONCEPTUAL PIPELINE SECTIONS	1
05805/4-04	CONCEPTUAL CULVERT SECTIONS	1

NOT FOR CONSTRUCTION

	DESIGN TS	CHECKED	APPROVED FOR ISSUE:	DRAFT	RILEY CONSULTANTS	P.O. BOX 4355 CHRISTCHURCH TEL. 03-3794402 FAX. 03-3794403	TITLE	PUKAKI IRRIGATION COMPANY LTD EVIDENCE FOR 3 CUMEC CONVEYANCE OPTIONS DRAWING INDEX	CADFILE 05805_3-1 SCALES (A3)	DRAWING No. 05805/3-00	REV. 0
0	FIRST ISSUE		DATE DRAWN OCT 2009	DATE: / /							
REV	DESCRIPTION	BY	DATE								

LEGEND

- LINED CANAL
- UNLINED CANAL
- PIPED
- - - NOMINAL CENTRELINE OF FARM



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TS		DRAFT
DRAWN	CHECKED	
TS		
DATE DRAWN		DATE: / /
OCT 2009		

RILEY CONSULTANTS

P.O. BOX 4355
CHRISTCHURCH

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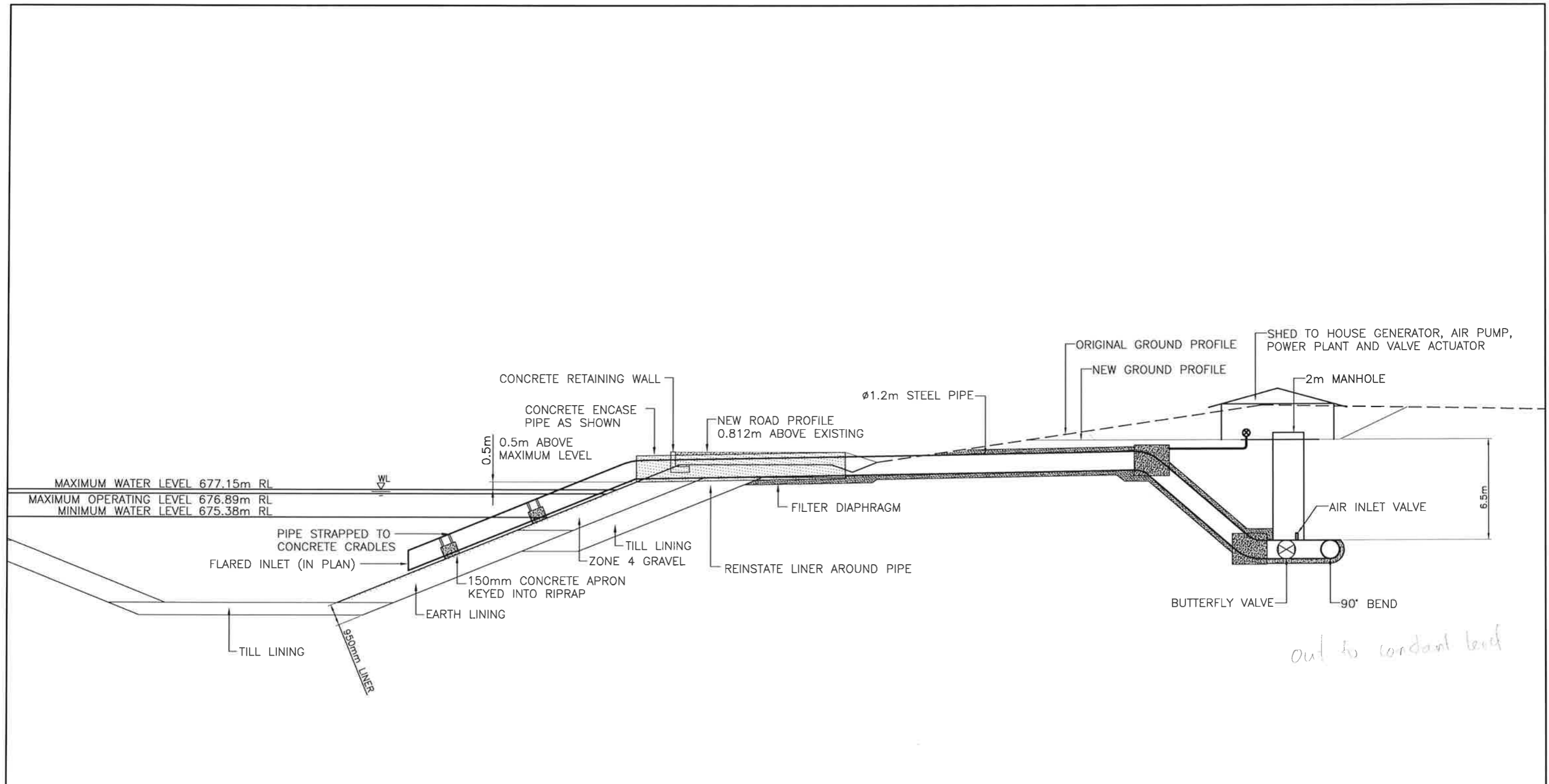
TITLE

PUKAKI IRRIGATION COMPANY LTD

SCOPING STUDY FOR 3 CUMEC CONVEYANCE OPTIONS

OVERVIEW PLAN

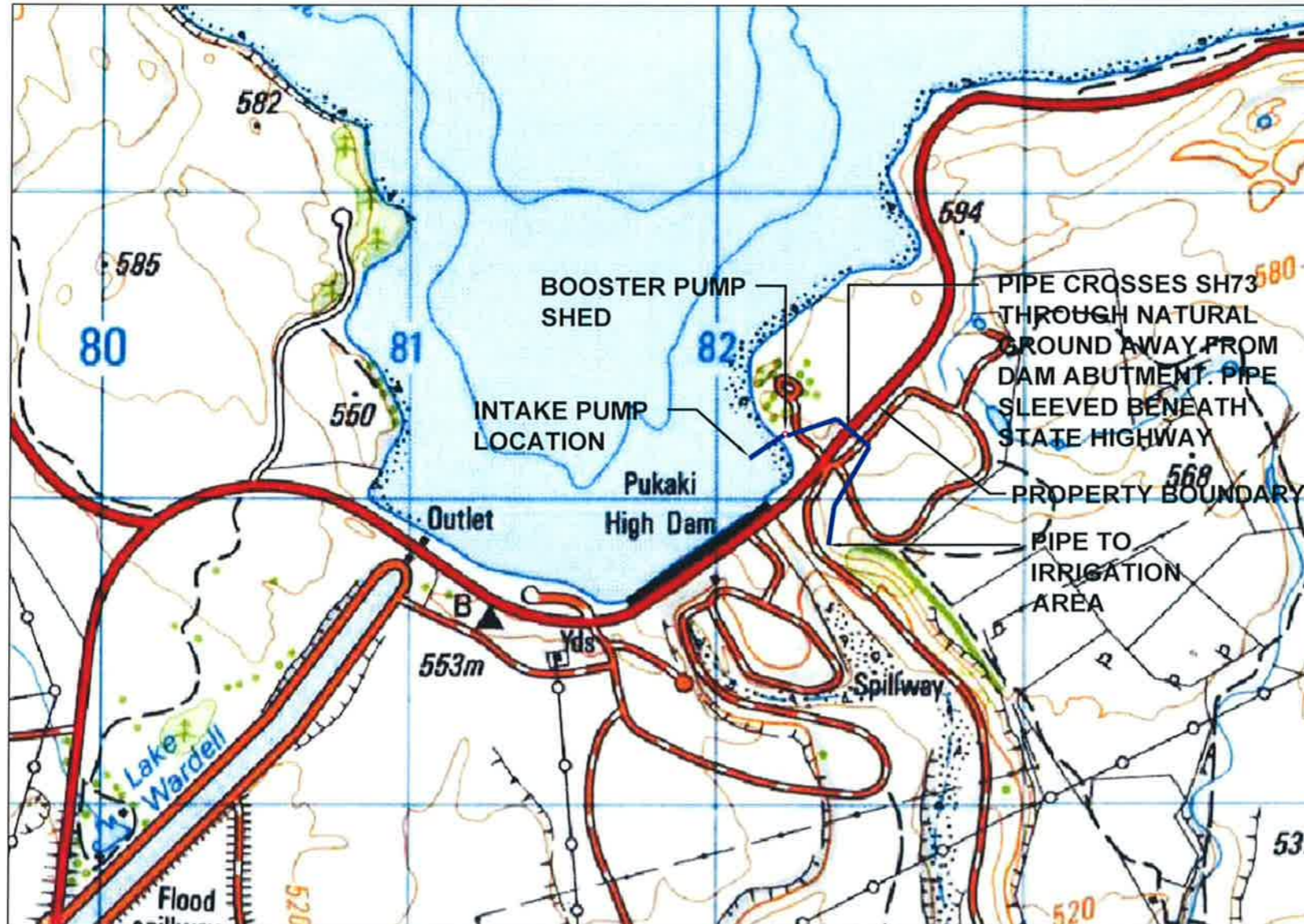
CADFILE	05805_3-1
SCALES (A3)	1:50,000
DRAWING No.	05805/3-1
REV.	0



TYPICAL INTAKE SECTION DETAIL
SCALE 1:250


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DESIGN AW CHECKED AW DRAWN AW CHECKED AW		APPROVED FOR ISSUE: DRAFT	RILEY CONSULTANTS	P.O. BOX 4355 CHRISTCHURCH TEL. 03-3794402 FAX. 03-3794403	TITLE PUKAKI IRRIGATION COMPANY LTD. INTAKE CONCEPT DESIGN SPHION INTAKE SECTION	CADFILE 05805_3-08 SCALES (A3) 1:250	DRAWING No. 05805/3-08	REV. 0
0	FIRST ISSUE	DATE DRAWN 15.05.09	DATE: / /					
REV	DESCRIPTION	BY	DATE					



LOCATION PLAN
SCALE 1:20000

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DESIGN CHECKED TS		APPROVED FOR ISSUE:		 P.O. BOX 4355 CHRISTCHURCH TEL. 03-3794402 FAX. 03-3794403	TITLE		CADFILE 05805/3-AUG-1		
DRAWN CHECKED AW		DRAFT			PUKAKI IRRIGATION COMPANY LTD. LAKE PUKAKI INTAKE CONCEPT AT DAM INTAKE CONCEPT DRAWING PLAN		SCALES (A3) AS SHOWN DRAWING No. 05805/3-AUG-1 REV. 0		
0	FIRST ISSUE	DATE DRAWN AUG 09	DATE: / /						
REV	DESCRIPTION	BY	DATE						

MAXIMUM LAKE LEVEL R.L. 532.5M



MINIMUM LAKE LEVEL R.L. 518.2M
(OR MINIMUM OPERATING LEVEL TO BE DETERMINED)

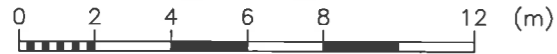
SUBMERSIBLE PUMP (KSB AMAREX
KRT OR SIMILAR) AND INTAKE
SCREEN (TYPE TO BE CONFIRMED)

LAKE BED PROFILE (INDICATIVE
ONLY. TO BE CONFIRMED FOR
FINAL DESIGN)

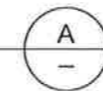
PREFABRICATED FLEXIBLE OR
REMOVABLE PIPE CONNECTION

200mm THICK CONCRETE PAD

SCALE 1:200



DETAIL



SCALE 1:200

NOTES:-

1. PUMP AND INTAKE LOCATED ON THE LAKE FLOOR BELOW MINIMUM WATER LEVEL
2. DESIGN FLOW RATE IS 3400 L/s

1300mm PIPE ABOVE GROUND BELOW SEASONAL MINIMUM LAKE LEVEL. EROSION
PROTECTION WORKS TO BE CONFIRMED FOR PIPE BELOW WATER LEVEL

RL 532.5m NORMAL MAX CONTROL LEVEL

RL 518.2m MIN CONTROL LEVEL

SHED TO HOUSE SWITCH
GEAR, BOOSTER PUMP AT MINIMUM RL 535.5m

PIPE TO IRRIGATION AREA

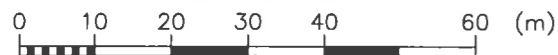
NOT
BURIED
BURIED

LAKE BED PROFILE INDICATIVE ONLY.
TO BE CONFIRMED FOR FINAL DESIGN

CROSS SECTION

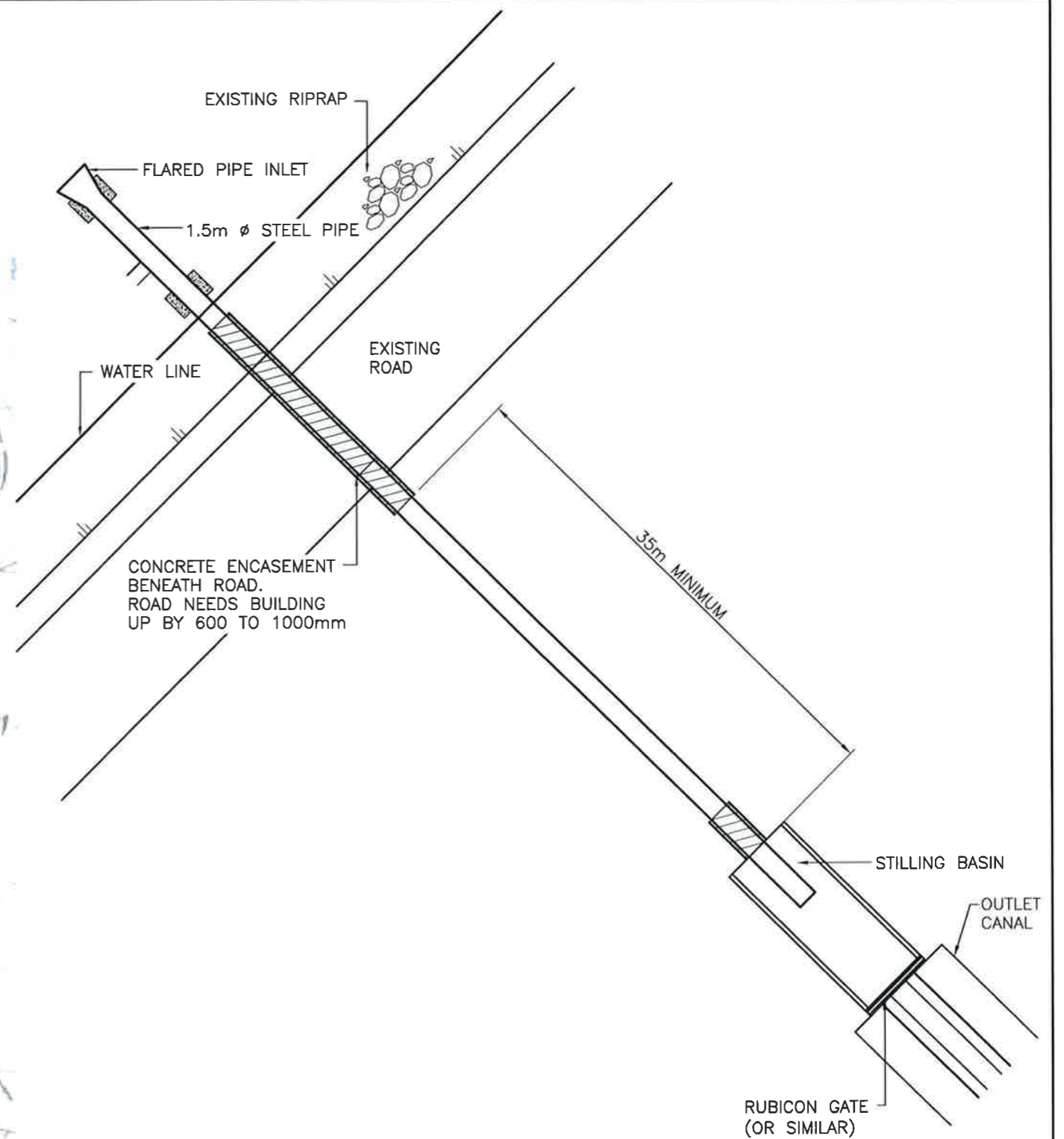
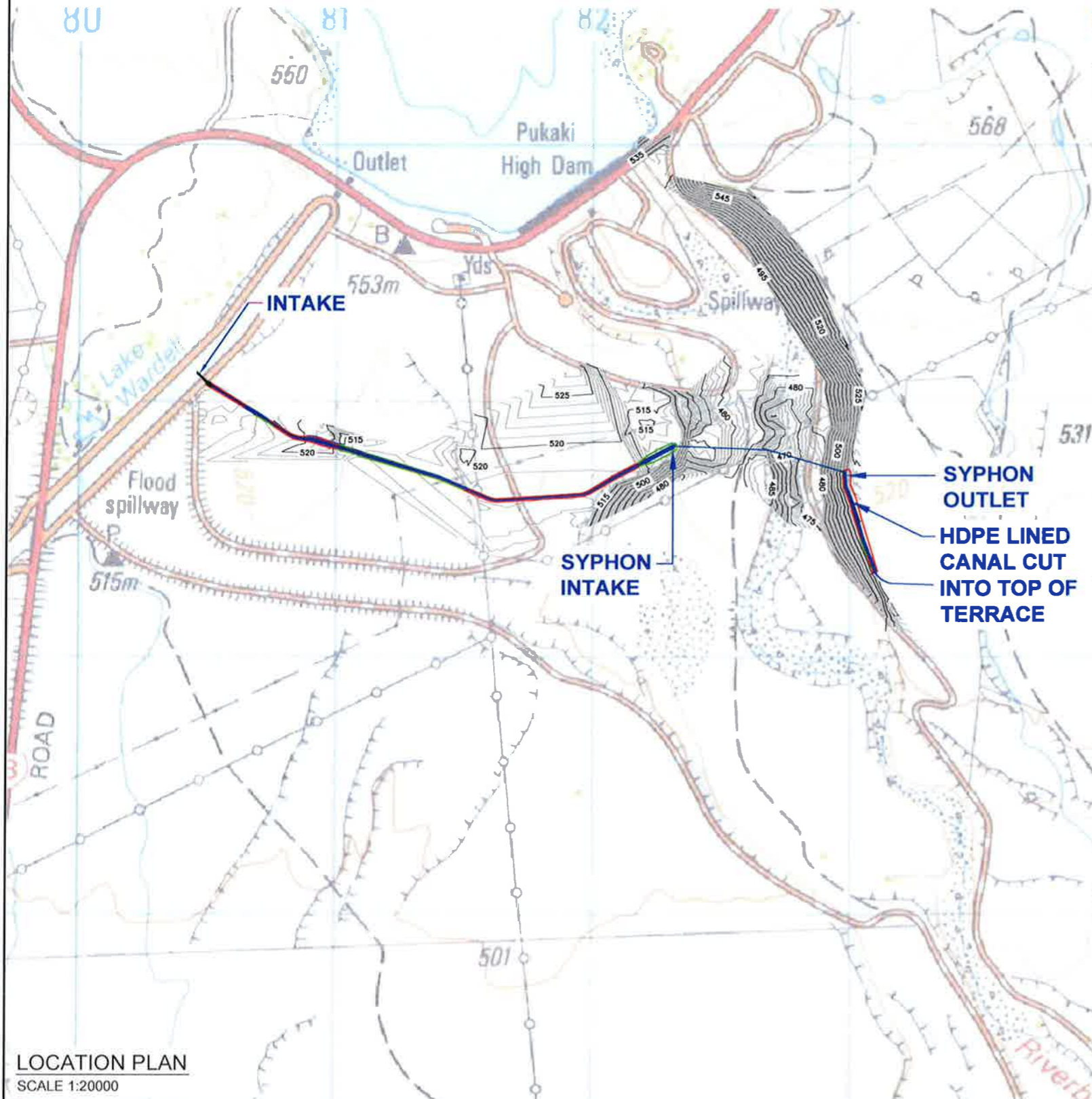
SCALE 1:1000

SCALE 1:1000

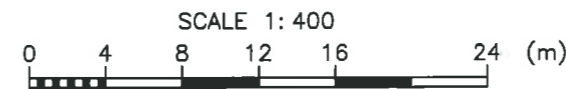


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DESIGN TS		CHECKED	APPROVED FOR ISSUE:	P.O. BOX 4355 CHRISTCHURCH TEL. 03-3794402 FAX. 03-3794403	TITLE	PUKAKI IRRIGATION COMPANY LTD. LAKE PUKAKI INTAKE CONCEPT AT DAM INTAKE DETAIL	CADFILE 05805/3-JUL-2 SCALES (A3) AS SHOWN	DRAWING No. 05805/3-JUL-2	REV. 0
DRAWN AW		CHECKED	DRAFT		DATE				
0	FIRST ISSUE				DATE: / /				
REV	DESCRIPTION	BY	DATE						



LOCATION PLAN
SCALE 1:20000



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2	REVISION TWO	AW	24.08.09	DRAWN	CHECKED
1	REVISION ONE	AW	18.08.09	AW	
0	FIRST ISSUE			DATE DRAWN	
REV	DESCRIPTION	BY	DATE	JUN 09	

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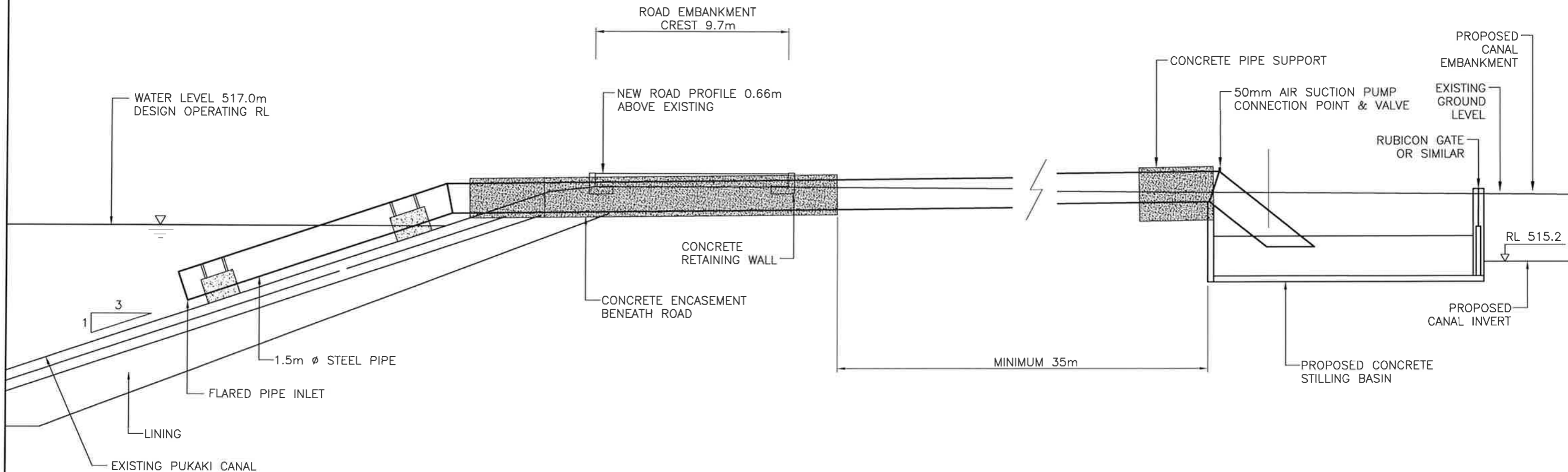
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PUKAKI IRRIGATION COMPANY LTD.
PUKAKI CANAL INTAKE CONCEPT
INTAKE CONCEPT DRAWING PLAN

PUKAKI IRRIGATION COMPANY LTD.
PUKAKI CANAL INTAKE CONCEPT
INTAKE CONCEPT DRAWING PLAN

CADFILE 05805/3-JUN-1-2	REV.
SCALES (A3) AS SHOWN	
DRAWING No. 05805/3-JUN-1	2

NOTES:-

1. PROPOSED TAKE IS 3,400 L/s



CROSS SECTION
SCALE 1:200



NOT FOR CONSTRUCTION

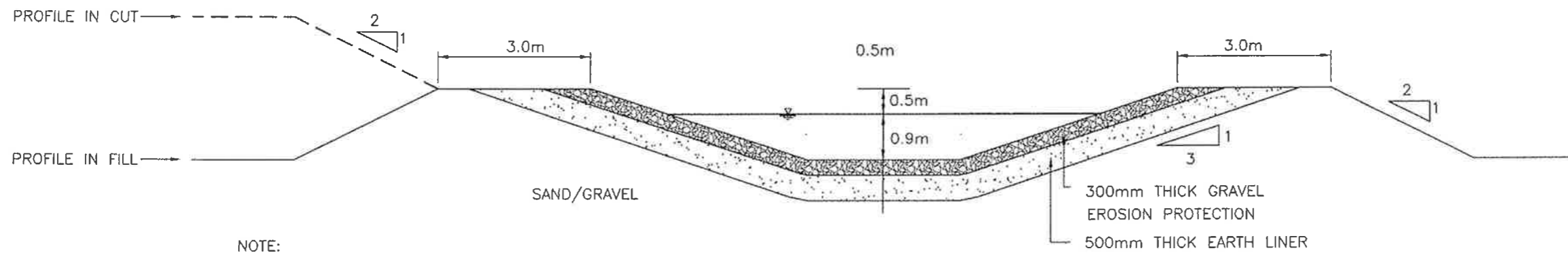
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REV	DESCRIPTION	BY	DATE		

APPROVED FOR ISSUE:
DRAFT
DATE: / /

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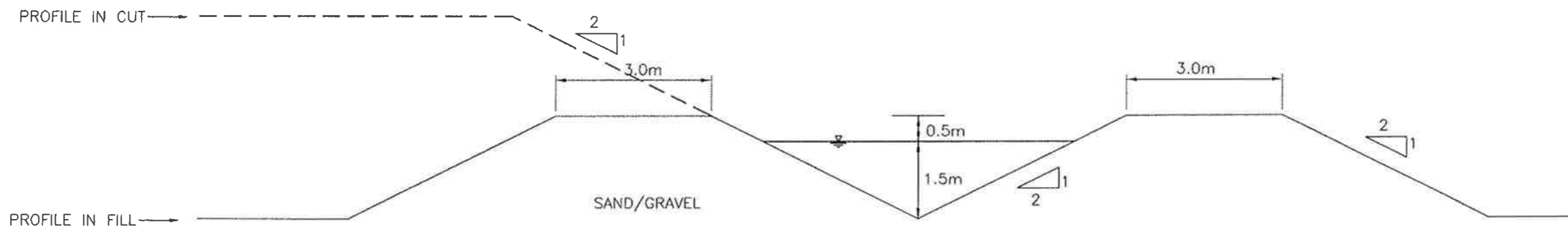
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PUKAKI IRRIGATION COMPANY LTD.
PUKAKI CANAL INTAKE CONCEPT
SECTION

CADFILE 05805/3-JUN-1-2	REV.
SCALES (A3) AS SHOWN	
DRAWING No. 05805/3-JUN-2	2



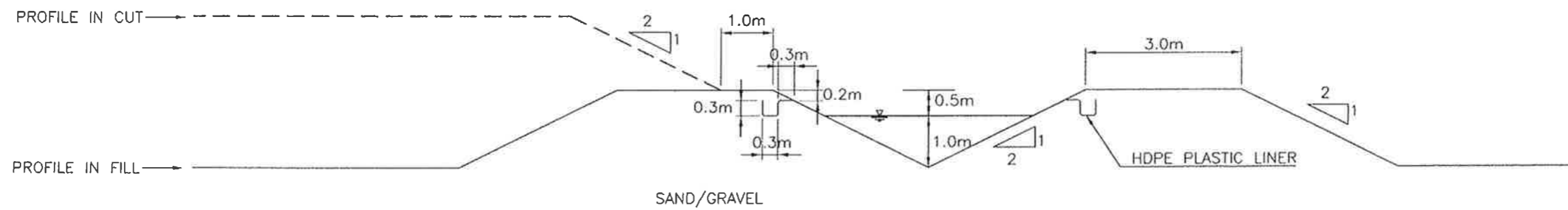
NOTE:
1. CANAL SLOPE FROM 1V:1000H TO 1V:2000H

TYPICAL CROSS SECTION - LINED CANAL



NOTE:
1. CANAL SLOPE FROM 1V:1000H TO 1V:2000H

TYPICAL CROSS SECTION - UNLINED CANAL



NOTE:
1. CANAL SLOPE MINIMUM 1V:1000H.

TYPICAL CROSS SECTION - HDPE LINED CANAL



DESIGNED	TS
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0	FIRST ISSUE
REV	DESCRIPTION
BY	DATE

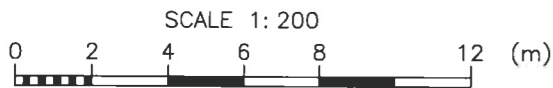
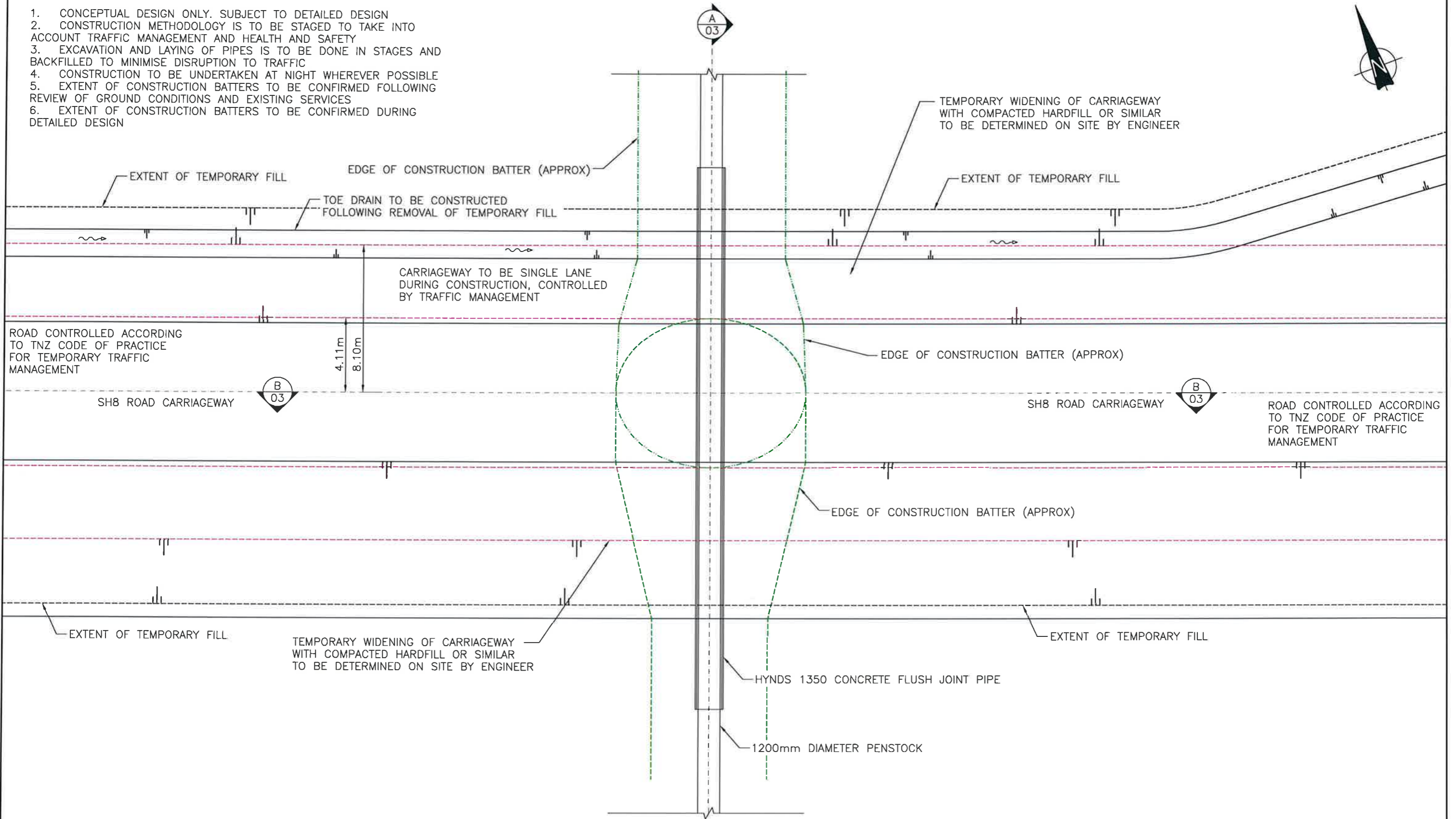
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CHRISTCHURCH
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FAX. 03-3794403

TITLE
PUKAKI IRRIGATION COMPANY
OPTION 1 CONVEYANCE ROUTE
TYPICAL CANAL CROSS SECTIONS

CADFILE	05805_1-3	DATE	DECEMBER 2006
SCALES (A3)	1 : 100		
DRAWING No.	05805/1-5	REV.	

NOTES:-

1. CONCEPTUAL DESIGN ONLY. SUBJECT TO DETAILED DESIGN
2. CONSTRUCTION METHODOLOGY IS TO BE STAGED TO TAKE INTO ACCOUNT TRAFFIC MANAGEMENT AND HEALTH AND SAFETY
3. EXCAVATION AND LAYING OF PIPES IS TO BE DONE IN STAGES AND BACKFILLED TO MINIMISE DISRUPTION TO TRAFFIC
4. CONSTRUCTION TO BE UNDERTAKEN AT NIGHT WHEREVER POSSIBLE
5. EXTENT OF CONSTRUCTION BATTERS TO BE CONFIRMED FOLLOWING REVIEW OF GROUND CONDITIONS AND EXISTING SERVICES
6. EXTENT OF CONSTRUCTION BATTERS TO BE CONFIRMED DURING DETAILED DESIGN



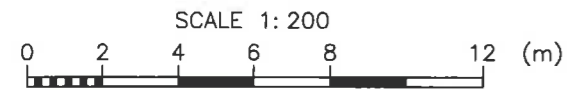
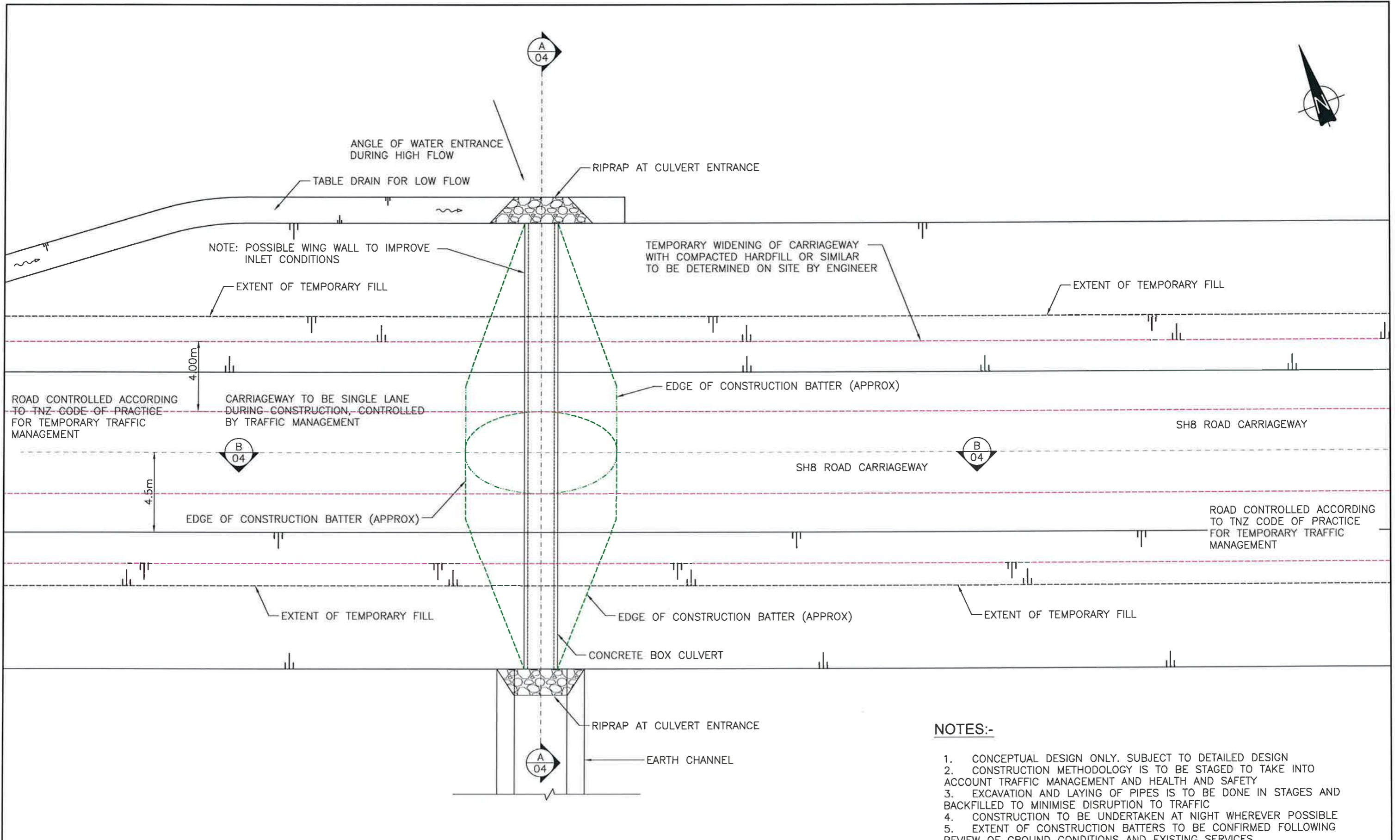
PLAN OF CULVERT & PIPE
SCALE 1:200

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DESIGN	CHECKED	AW	APPROVED FOR ISSUE:
DRAWN	CHECKED	AW	DRAFT
DATE DRAWN	SEPT 09	DATE:	/ /
REVISION	DESCRIPTION	BY	DATE
1	REVISION ONE		
0	FIRST ISSUE		

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TITLE	PUKAKI IRRIGATION CO LTD		CADFILE
	SH8 PIPELINE UNDERPASS		05805_4_01
	CONCEPTUAL PIPELINE CROSSING PLAN		SCALES (A3) AS SHOWN
	DRAWING No.	REV.	
	05805/4-01	1	



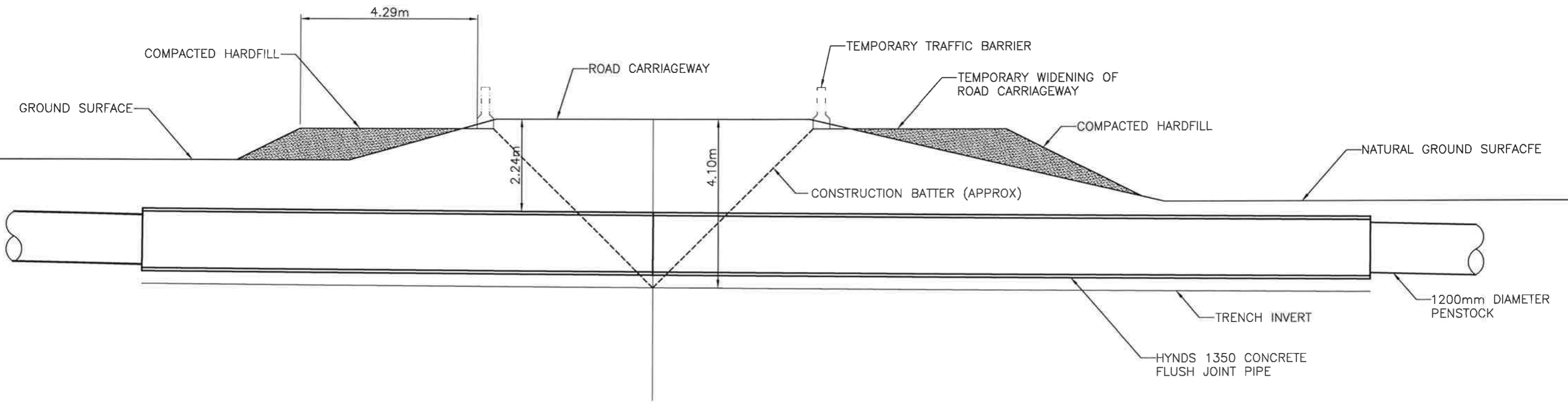
PLAN OF CULVERT & PIPE
SCALE 1:200

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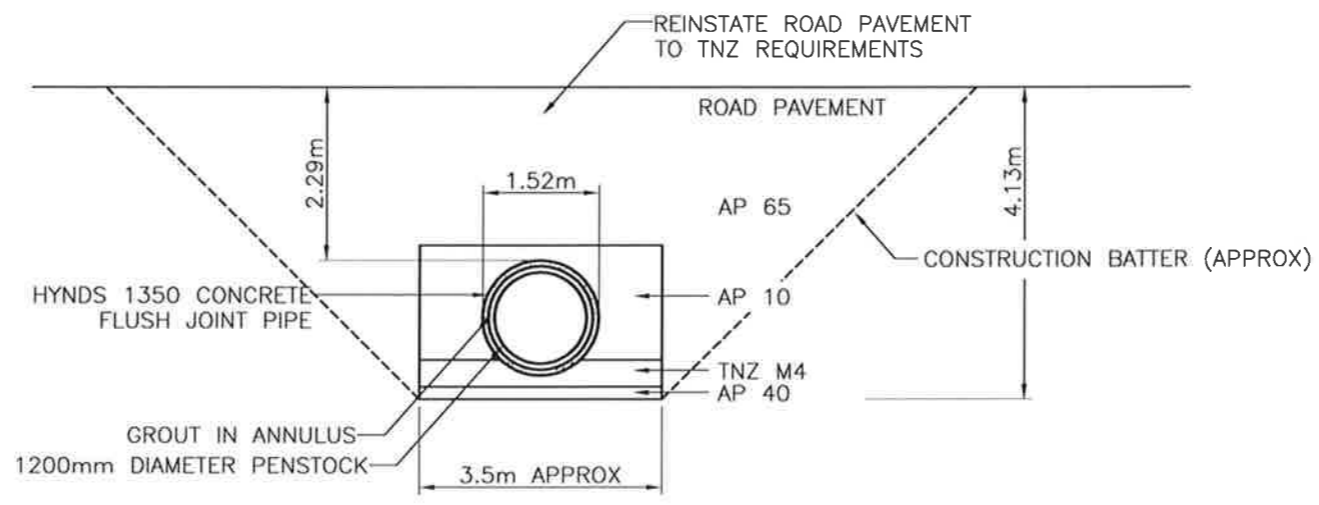
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REV	DESCRIPTION	BY	DATE							



SECTION A
SCALE 1:100

NOTES:-

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SECTION B
SCALE 1:100

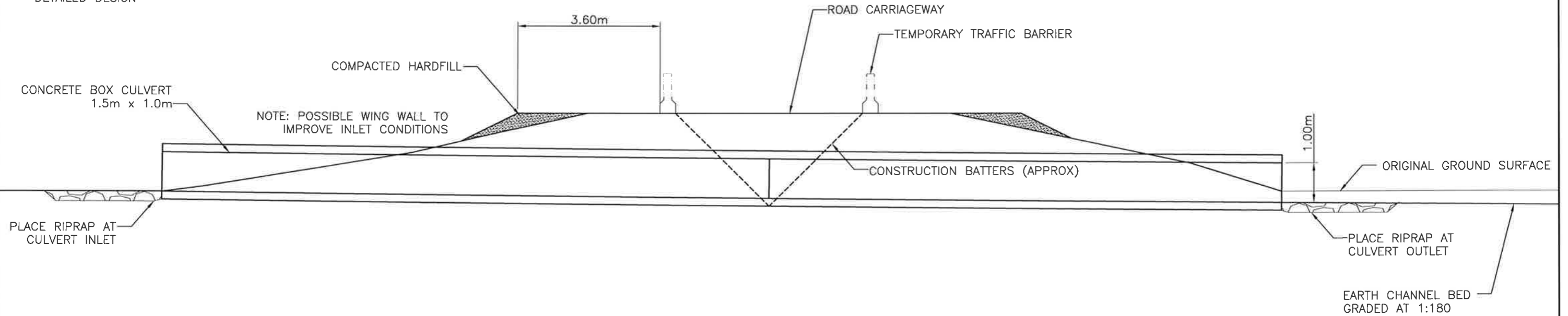


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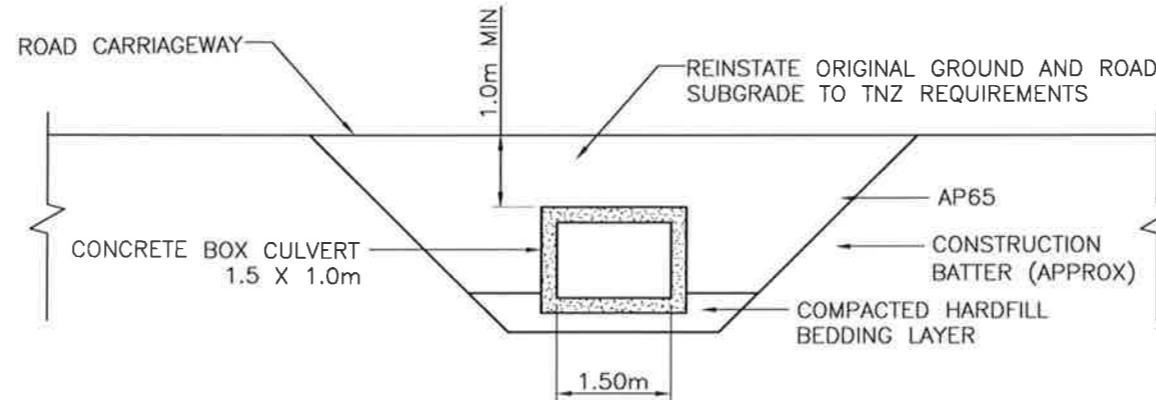
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REV	DESCRIPTION	BY	DATE						

NOTES:-

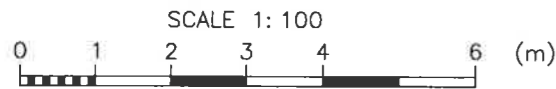
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SECTION **A**
SCALE 1:100



SECTION **B**
SCALE 1:100



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	DESIGN AW	CHECKED HN	APPROVED FOR ISSUE: DRAFT	 P.O. BOX 4355 CHRISTCHURCH TEL. 03-3794402 FAX. 03-3794403	TITLE PUKAKI IRRIGATION CO LTD SH8 PIPLINE UNDERPASS CONCEPTUAL CULVERT SECTIONS	CADFILE 05805_4_04 SCALES (A3) AS SHOWN	DRAWING No. 05805/4-04	REV. 1
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