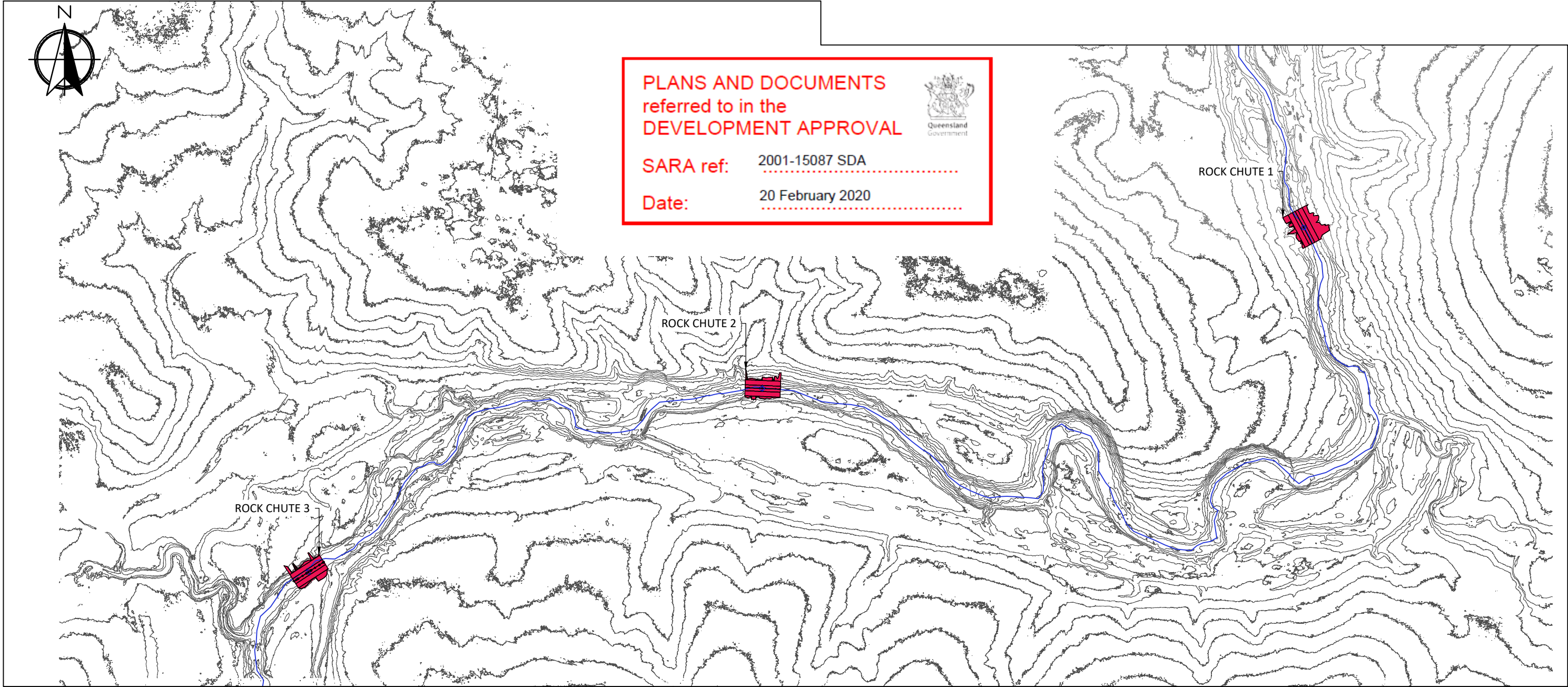


DRAWING SCHEDULE		
DRAWING NUMBER	REV	DRAWING TITLE
001	B	OVERALL PLAN VIEW, SHEET LAYOUT & NOTES
002	B	ROCK CHUTE 1 - SETOUT
003	B	ROCK CHUTE 1 - LONGITUDINAL SECTION
004	B	ROCK CHUTE 2 - SETOUT
005	B	ROCK CHUTE 2 - LONGITUDINAL SECTION
006	B	ROCK CHUTE 3 - SETOUT
007	B	ROCK CHUTE 3 - LONGITUDINAL SECTION
008	B	TYPICAL SECTIONS
009	B	TYPICAL SECTIONS

GENERAL NOTES

1. REFER TO TECHNICAL SPECIFICATION: TEN MILE CREEK EROSION REMEDIATION DETAIL DESIGN
2. COORDINATES ARE GDA94 ZONE 56.
3. CONTOURS ARE AT 1m INTERVALS.
4. SURVEY DATA CAPTURED IN 2018 WAS USED TO CREATE THE DTM UPON WHICH THE DESIGN IS BASED AND THIS DTM MAY NOT REPRESENT THE GROUND CONDITIONS AT THE TIME OF COMMENCEMENT OF WORKS.
5. DURING BOTH SETOUT AND CONSTRUCTION, IF PART OF THE DESIGN DOES NOT TIE INTO THE ON GROUND CONDITIONS, NEILLY GROUP ENGINEERING, THROUGH THE SITE SUPERVISOR, SHOULD BE CONSULTED TO DETERMINE HOW TO PROCEED WITHOUT COMPROMISING THE DESIGN INTENT.
6. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATION AND DEPTH OF ALL UNDERGROUND SERVICES PRIOR TO THE COMMENCEMENT OF WORKS.
7. DISTURBANCE TO VEGETATION SHALL BE MINIMISED AND SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION.



SITE: TEN MILE CREEK					
TITLE: REEF TRUST IV STREAM BANK EROSION REMEDIATION OVERALL PLAN VIEW, SHEET LAYOUT & NOTES					
SCALE @ A3 1:4000	DRAWN DATE 12/07/19	DRAWN TB	DESIGNED JA	APPRVD AN	APPRVD DATE 12/07/19
PROJECT NO. 18060	DRAWING NO. 001	REVISION B	SHEET NO. 1	FILE NAME 18060 (2).dwg	



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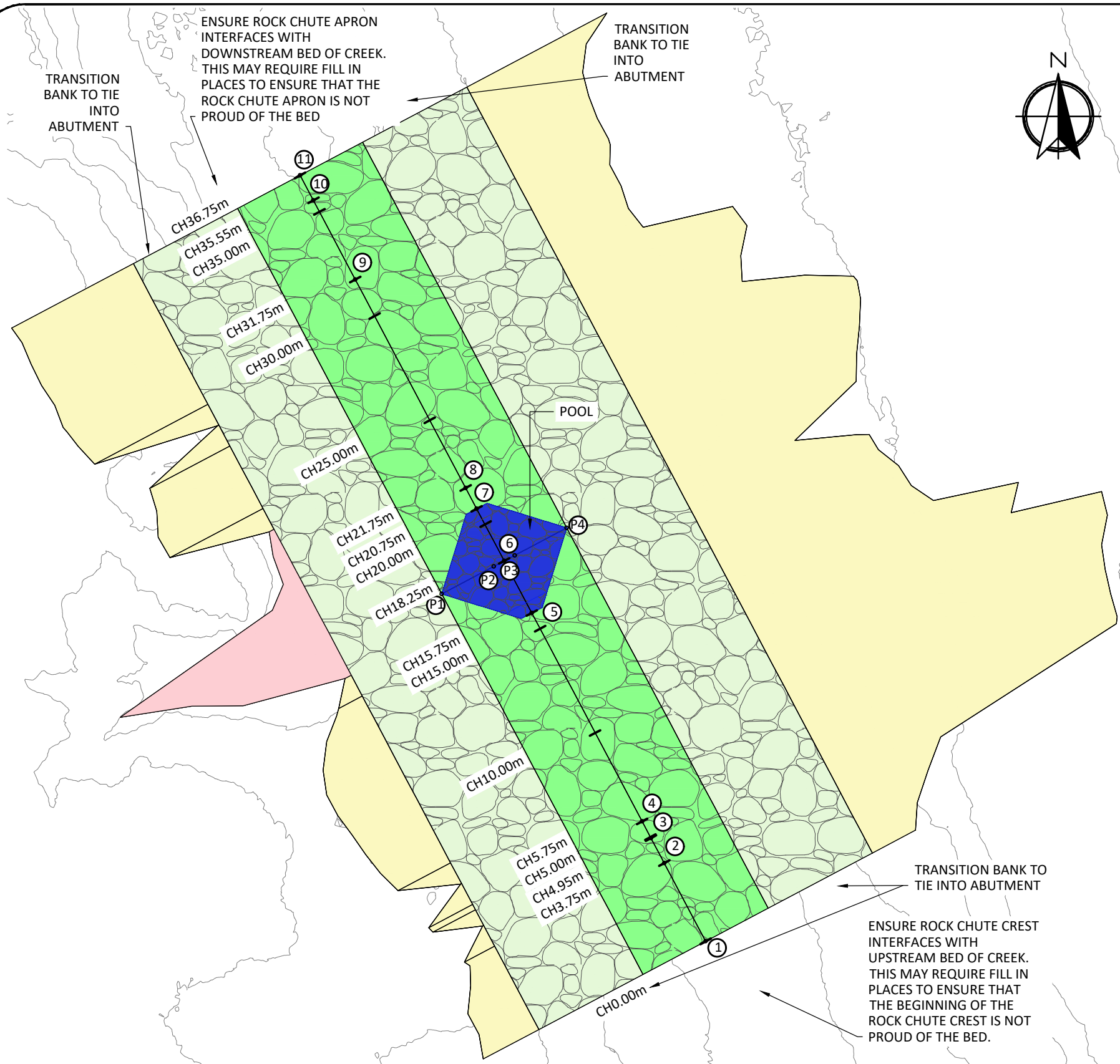


Catchment
Solutions

REV	DESCRIPTION	DATE	APPRVD
B	FOR APPROVAL	15/01/20	AN
A	DRAFT ISSUE	12/07/19	AN

STATUS:

FOR APPROVAL



ROCK CHUTE 1 SETOUT POINTS							
SETOUT NO.	TYPE	STATION	EASTING	NORTHING	BEARING		
					DEG	MIN	SEC
1	START CHUTE UPSTREAM FACE	0	191758.66	7442012.74	332	6	20.7
2	START CREST/START OF CREST CUT OFF WALL	3.75	191756.90	7442016.06	332	6	20.7
3	END CREST CUT OFF WALL	4.95	191756.34	7442017.12	332	6	20.7
4	END CREST	5.75	191755.97	7442017.83	332	6	20.7
5	START POOL	15.75	191751.29	7442026.66	332	6	20.7
6	BASE POOL	18.25	191750.12	7442028.87	332	6	20.7
7	END POOL/START POOL APRON	20.75	191748.95	7442031.08	332	6	20.7
8	END POOL APRON	21.75	191748.48	7442031.97	332	6	20.7
9	START APRON	31.75	191743.81	7442040.81	332	6	20.7
10	START APRON CUT OFF WALL	35.55	191742.03	7442044.16	332	6	20.7
11	END APRON/END OF APRON CUT OFF WALL	36.75	191741.47	7442045.22	332	6	20.7

ROCK CHUTE 1 POOL SETOUT POINTS							
SETOUT NO.	TYPE	STATION	EASTING	NORTHING	BEARING		
					DEG	MIN	SEC
P1	POOL START	0	191747.47	7442027.47	62	6	20.7
P2	POOL BASE START	2.5	191749.68	7442028.64	62	6	20.7
P3	POOL BASE END	3.5	191750.56	7442029.11	62	6	20.7
P4	POOL END	6	191752.77	7442030.28	62	6	20.7

PLANS AND DOCUMENTS
referred to in the
DEVELOPMENT APPROVAL



SARA ref: 2001-15087 SDA

Date: 20 February 2020

SITE: TEN MILE CREEK					
TITLE: REEF TRUST IV STREAM BANK EROSION REMEDIATION ROCK CHUTE 1 - SETOUT					
SCALE @ A3 1:200	DRAWN DATE 12/07/19	DRAWN TB	DESIGNED JA	APPRVD AN	APPRVD DATE 12/07/19
PROJECT NO. 18060	DRAWING NO. 002	REVISION B	SHEET NO. 2	FILE NAME 18060 (2).dwg	

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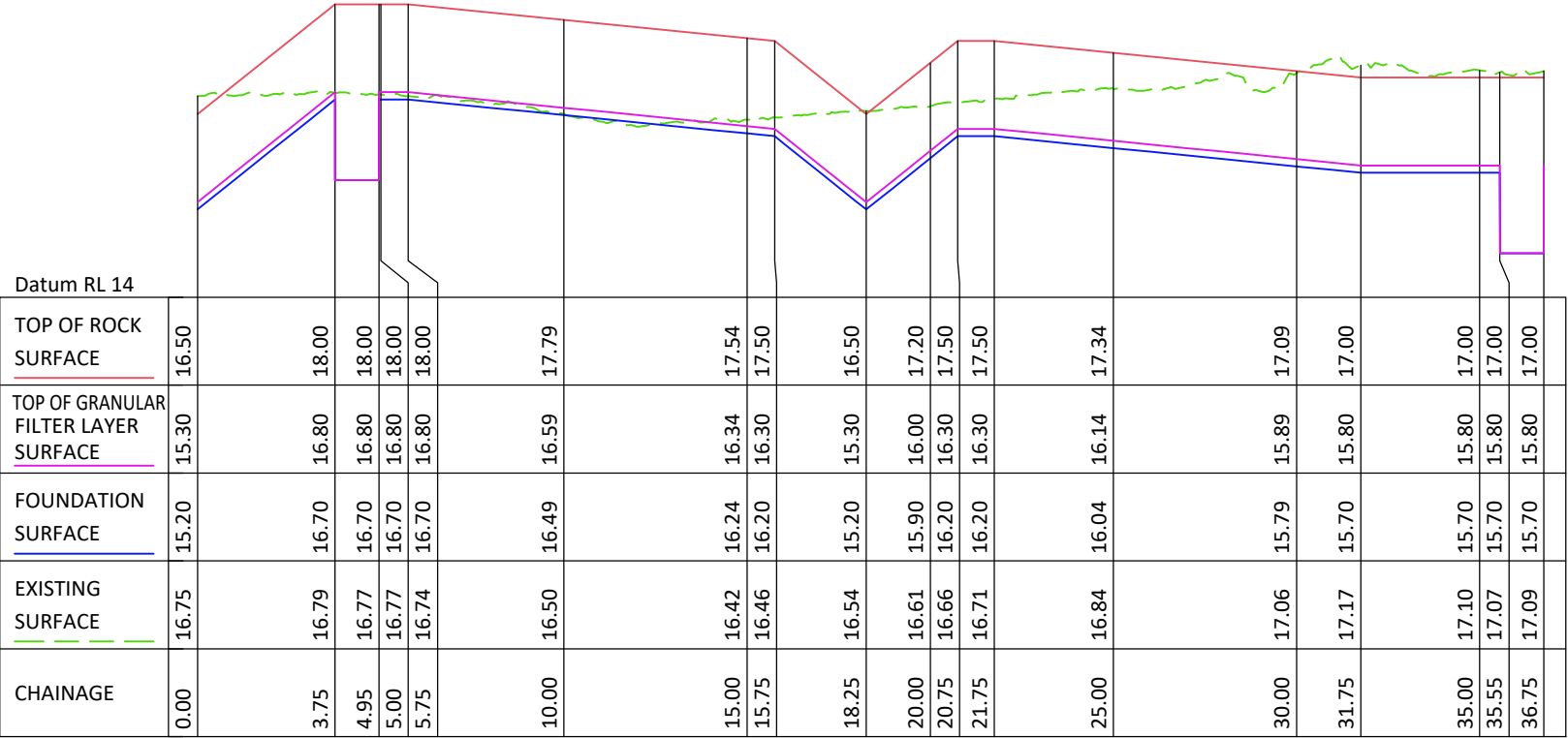
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CLIENT:

B	FOR APPROVAL	15/01/20	AN
A	DRAFT ISSUE	12/07/19	AN
REV	DESCRIPTION	DATE	APPRVD
STATUS: FOR APPROVAL			

LEGEND	
	ROCK CHUTE SPILLWAY
	1V:2.5H ABUTMENT
	POOL
	1V:2.5H UPPER BATTER CUT
	1V:20H UPPER BATTER FILL

SCALES
Horizontal Scale 1:200
Vertical Scale 1:100



PLANS AND DOCUMENTS
referred to in the
DEVELOPMENT APPROVAL



SARA ref: 2001-15087 SDA

Date: 20 February 2020

SITE: TEN MILE CREEK					
TITLE: REEF TRUST IV STREAM BANK EROSION REMEDIATION ROCK CHUTE 1 - LONGITUDINAL SECTION					
SCALE @ A3	DRAWN DATE	DRAWN	DESIGNED	APPRVD	APPRVD DATE
-	12/07/19	TB	JA	AN	12/07/19
PROJECT NO.	DRAWING NO.	REVISION	SHEET NO.	FILE NAME	
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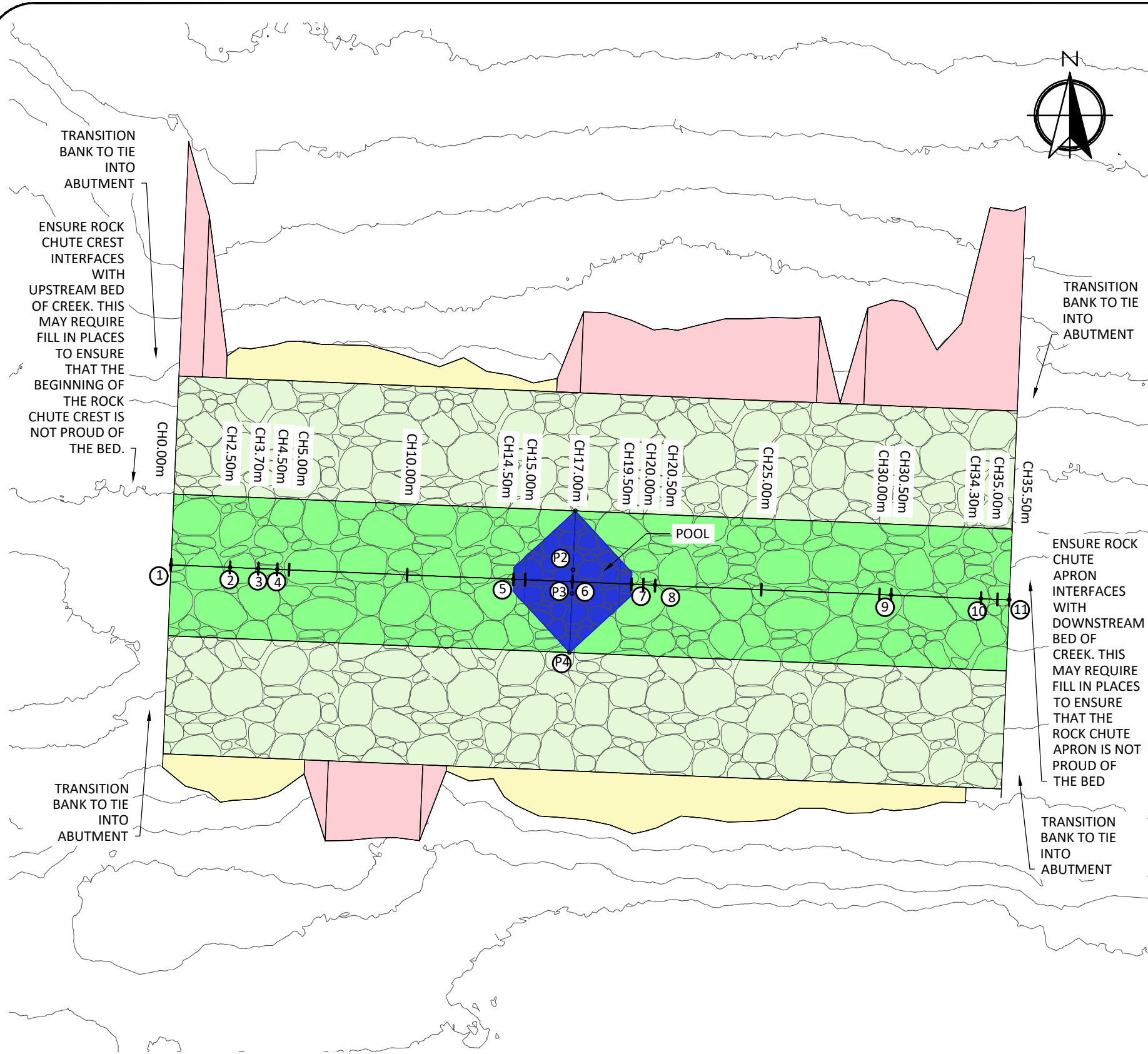


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B	FOR APPROVAL	15/01/20	AN
A	DRAFT ISSUE	12/07/19	AN
REV	DESCRIPTION	DATE	APPRVD
STATUS: FOR APPROVAL			



ROCK CHUTE 2 SETOUT POINTS							
SETOUT NO.	TYPE	STATION	EASTING	NORTHING	BEARING		
					DEG	MIN	SEC
1	START CHUTE UPSTREAM FACE	0	191188.99	7441868.08	92	23	35.4
2	START CREST/START OF CREST CUT OFF WALL	2.5	191191.48	7441867.97	92	23	35.4
3	END CREST CUT OFF WALL	3.7	191192.68	7441867.92	92	23	35.4
4	END CREST	4.5	191193.48	7441867.89	92	23	35.4
5	START POOL	14.5	191203.47	7441867.47	92	23	35.4
6	BASE POOL	17	191205.97	7441867.37	92	23	35.4
7	END POOL/START POOL APRON	19.5	191208.47	7441867.26	92	23	35.4
8	END POOL APRON	20.5	191209.47	7441867.22	92	23	35.4
9	START APRON	30.5	191219.46	7441866.80	92	23	35.4
10	START APRON CUT OFF WALL	34.3	191223.26	7441866.64	92	23	35.4
11	END APRON/END OF APRON CUT OFF WALL	35.5	191224.46	7441866.59	92	23	35.4

ROCK CHUTE 2 POOL SETOUT POINTS							
SETOUT NO.	TYPE	STATION	EASTING	NORTHING	BEARING		
					DEG	MIN	SEC
P1	POOL START	0	191206.10	7441870.36	182	23	35.4
P2	POOL BASE START	2.5	191205.99	7441867.87	182	23	35.4
P3	POOL BASE END	3.5	191205.95	7441866.87	182	23	35.4
P4	POOL END	6	191205.85	7441864.37	182	23	35.4

PLANS AND DOCUMENTS
referred to in the
DEVELOPMENT APPROVAL



SARA ref: 2001-15087 SDA

Date: 20 February 2020

SITE:
TEN MILE CREEK
TITLE:
REEF TRUST IV STREAM BANK EROSION REMEDIATION
ROCK CHUTE 2 - SETOUT

SCALE @ A3 1:200	DRAWN DATE 12/07/19	DRAWN TB	DESIGNED JA	APPRVD AN	APPRVD DATE 12/07/19
PROJECT NO. 18060	DRAWING NO. 004	REVISION B	SHEET NO. 4	FILE NAME 18060 (2).dwg	

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B	FOR APPROVAL	15/01/20	AN
A	DRAFT ISSUE	12/07/19	AN
REV	DESCRIPTION	DATE	APPRVD

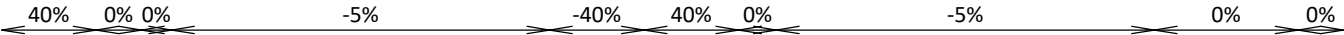
STATUS:

FOR APPROVAL

LEGEND

- ROCK CHUTE SPILLWAY
- 1V:2.5H ABUTMENT
- POOL
- 1V:2.5H UPPER BATTER CUT
- 1V:20H UPPER BATTER FILL

SCALES
Horizontal Scale 1:200
Vertical Scale 1:100



Datum RL 15					
TOP OF ROCK SURFACE	18.00	19.00	19.00	18.73	18.50
TOP OF GRANULAR FILTER LAYER SURFACE	16.80	17.80	17.80	17.52	17.30
FOUNDATION SURFACE	16.70	17.70	17.70	17.42	17.20
EXISTING SURFACE	18.67	18.42	18.37	18.42	18.91
CHAINAGE	0.00	2.50	3.70	10.00	14.50

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

SARA ref:

2001-15087 SDA

Date:

20 February 2020

SITE:
TEN MILE CREEK

TITLE:
REEF TRUST IV STREAM BANK EROSION REMEDIATION
ROCK CHUTE 2 - LONGITUDINAL SECTION

SCALE @ A3	DRAWN DATE	DRAWN	DESIGNED	APPRVD	APPRVD DATE
-	12/07/19	TB	JA	AN	12/07/19
PROJECT NO.	DRAWING NO.	REVISION	SHEET NO.	FILE NAME	
18060	005	B	5	18060 (2).dwg	

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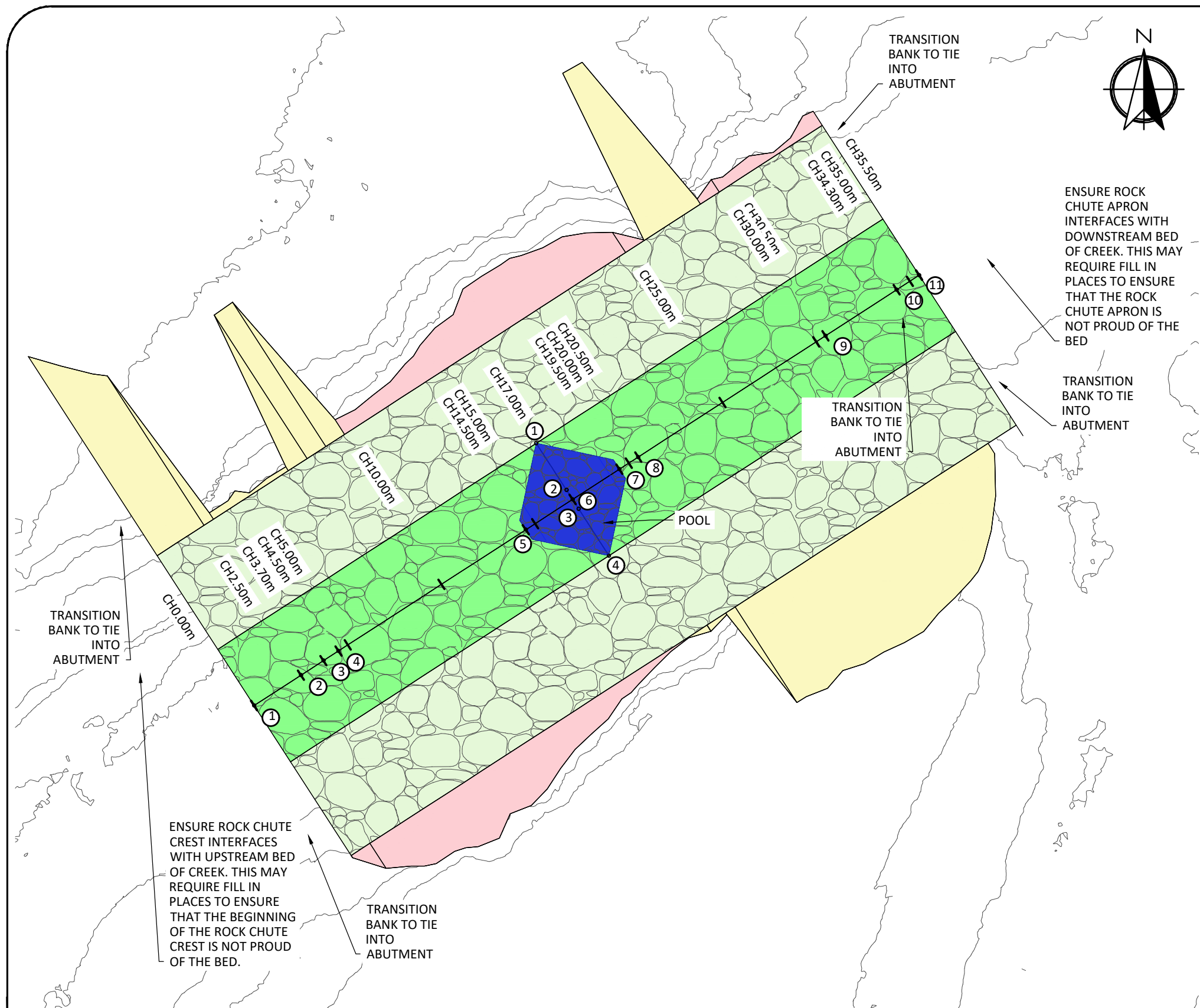
CLIENT:

Catchment Solutions

B	FOR APPROVAL	15/01/20	AN
A	DRAFT ISSUE	12/07/19	AN
REV	DESCRIPTION	DATE	APPRVD

STATUS:

FOR APPROVAL



ROCK CHUTE 3 SETOUT POINTS							
SETOUT NO.	TYPE	STATION	EASTING	NORTHING	BEARING		
					DEG	MIN	SEC
1	START CHUTE UPSTREAM FACE	0.00	190735.97	7441673.76	57	6	4.4
2	START CREST/START OF CREST CUT OFF WALL	2.50	190738.07	7441675.12	57	6	4.4
3	END CREST CUT OFF WALL	3.70	190739.07	7441675.77	57	6	4.4
4	END CREST	4.50	190739.75	7441676.21	57	6	4.4
5	START POOL	14.50	190748.14	7441681.64	57	6	4.4
6	BASE POOL	17.00	190750.24	7441683.00	57	6	4.4
7	END POOL/START POOL APRON	19.50	190752.34	7441684.35	57	6	4.4
8	END POOL APRON	20.50	190753.18	7441684.90	57	6	4.4
9	START APRON	30.50	190761.58	7441690.33	57	6	4.4
10	START APRON CUT OFF WALL	34.30	190764.77	7441692.39	57	6	4.4
11	END APRON/END OF APRON CUT OFF WALL	35.50	190765.77	7441693.04	57	6	4.4

ROCK CHUTE 3 POOL SETOUT POINTS							
SETOUT NO.	TYPE	STATION	EASTING	NORTHING	BEARING		
					DEG	MIN	SEC
P1	POOL START	0	190748.61	7441685.52	147	6	4.4
P2	POOL BASE START	2.5	190749.97	7441683.42	147	6	4.4
P3	POOL BASE END	3.5	190750.51	7441682.58	147	6	4.4
P4	POOL END	6	190751.87	7441680.48	147	6	4.4

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

SARA ref: 2001-15087 SDA

Date: 20 February 2020

SITE: TEN MILE CREEK					
TITLE: REEF TRUST IV STREAM BANK EROSION REMEDIATION ROCK CHUTE 3 - SETOUT					
SCALE @ A3 1:200	DRAWN DATE 12/07/19	DRAWN TB	DESIGNED JA	APPRVD AN	APPRVD DATE 12/07/19
PROJECT NO. 18060	DRAWING NO. 006	REVISION B	SHEET NO. 6	FILE NAME 18060 (2).dwg	

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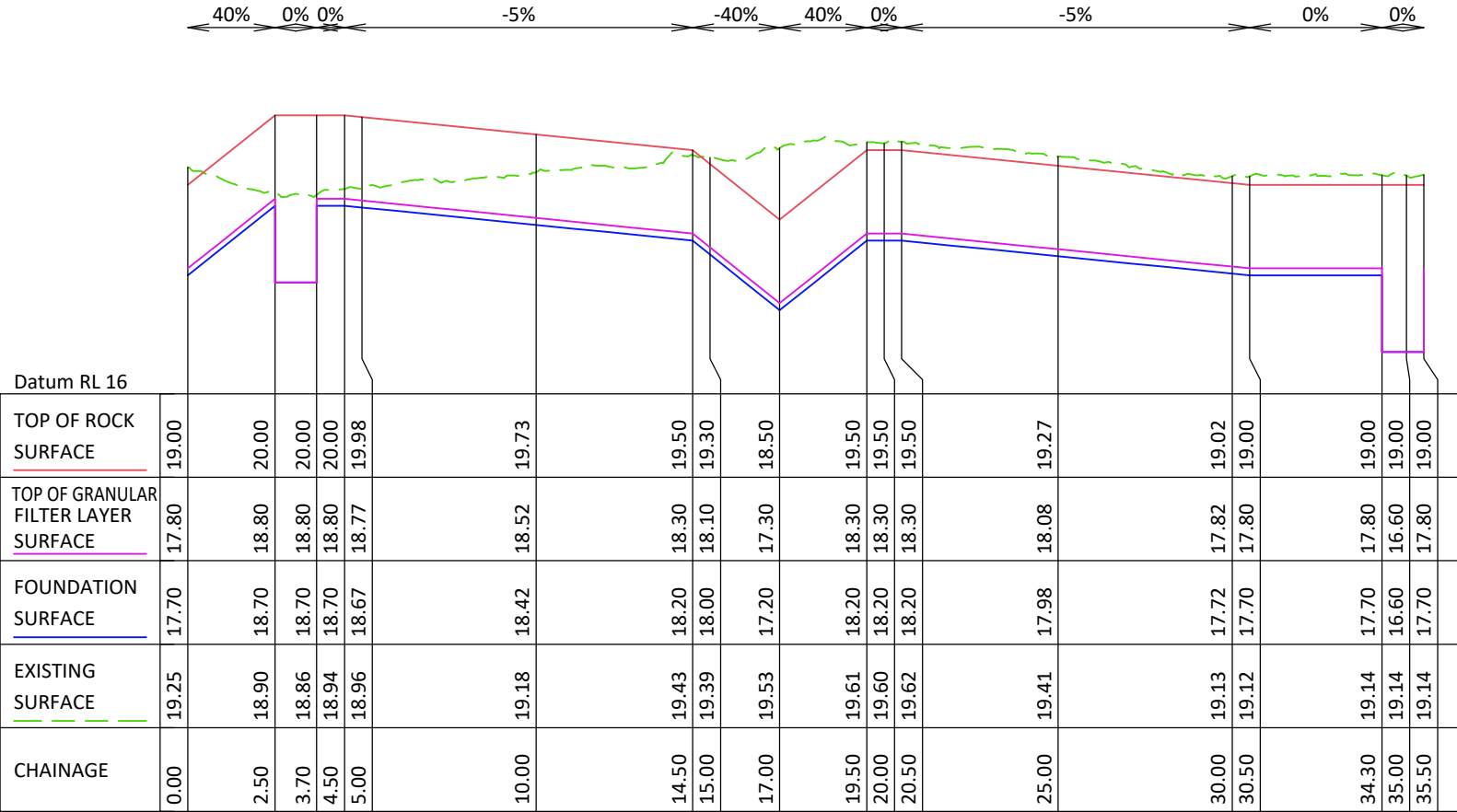
CLIENT:

B	FOR APPROVAL	15/01/20	AN
A	DRAFT ISSUE	12/07/19	AN
REV	DESCRIPTION	DATE	APPRVD

STATUS: **FOR APPROVAL**

LEGEND	
	ROCK CHUTE SPILLWAY
	1V:2.5H ABUTMENT
	POOL
	1V:2.5H UPPER BATTER CUT
	1V:20H UPPER BATTER FILL

SCALES
Horizontal Scale 1:200
Vertical Scale 1:100



PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

SARA ref: 2001-15087 SDA

Date: 20 February 2020

SITE:
TEN MILE CREEK

TITLE:
REEF TRUST IV STREAM BANK EROSION REMEDIATION
ROCK CHUTE 3 - LONGITUDINAL SECTION

SCALE @ A3	DRAWN DATE	DRAWN	DESIGNED	APPRVD	APPRVD DATE
-	12/07/19	TB	JA	AN	12/07/19
PROJECT NO.	DRAWING NO.	REVISION	SHEET NO.	FILE NAME	
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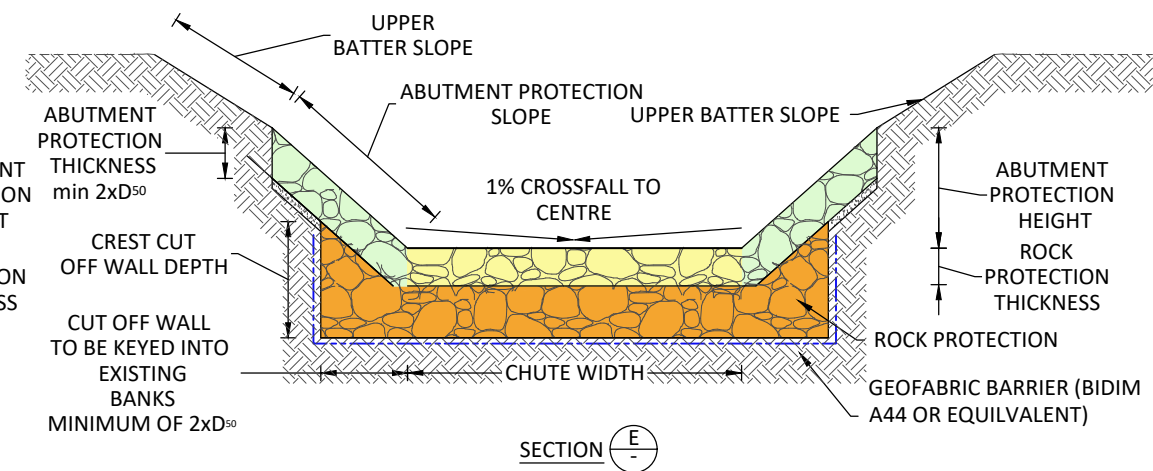
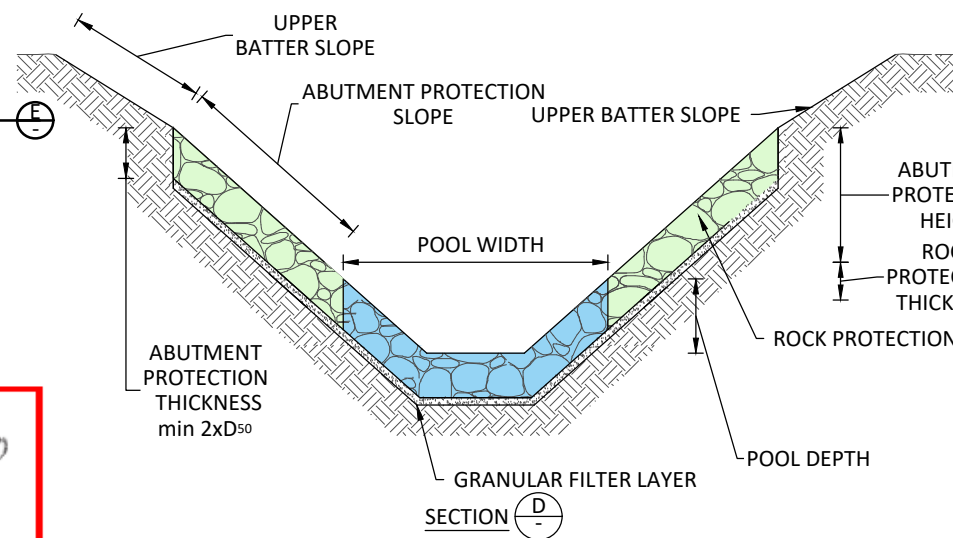
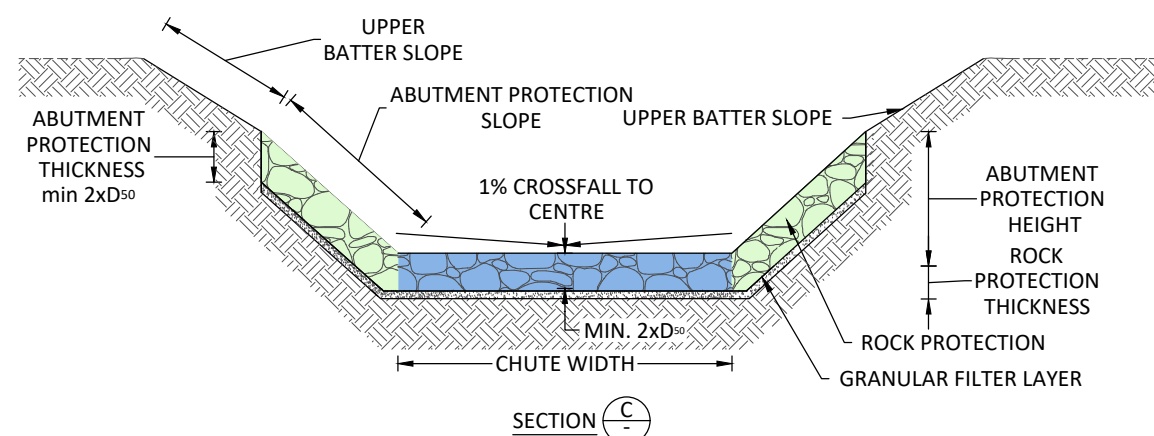
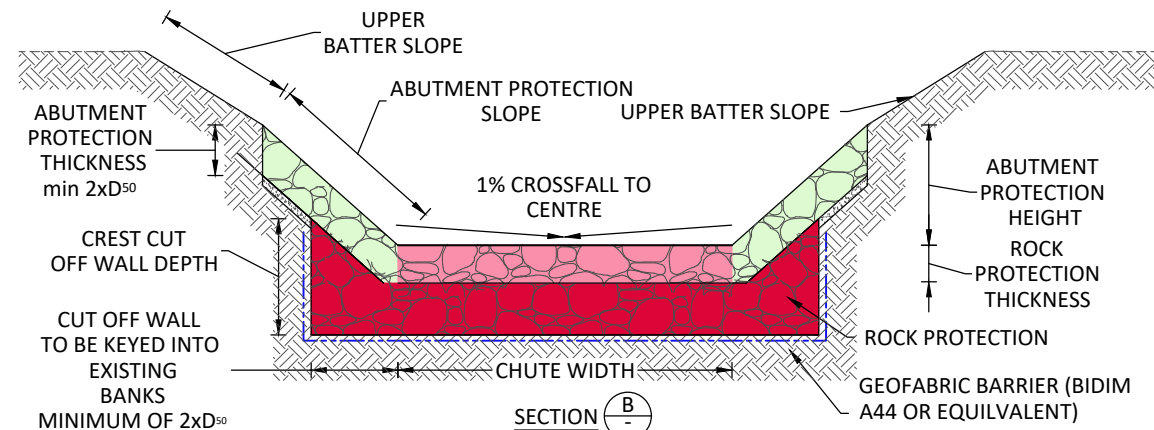
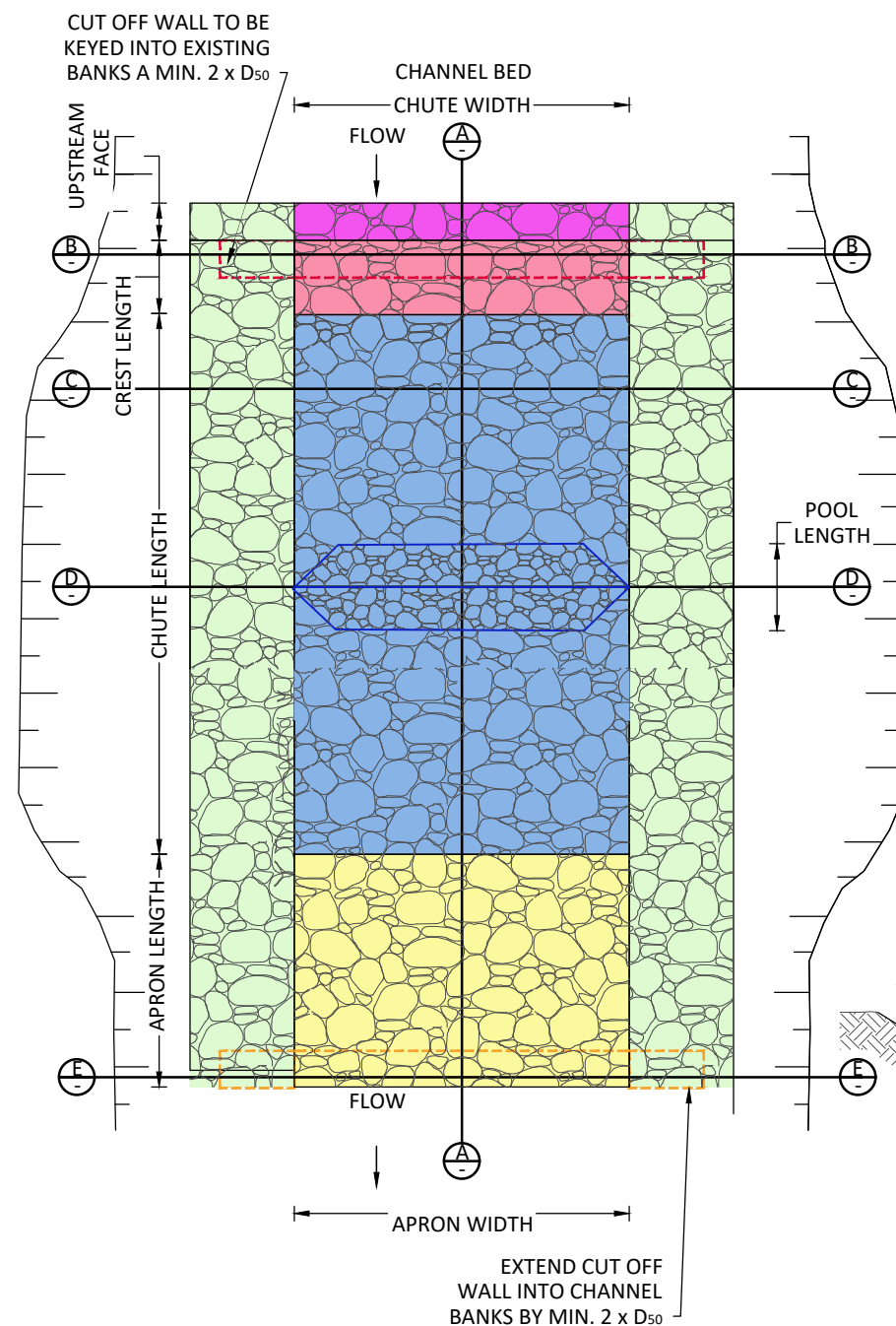
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CLIENT:

B	FOR APPROVAL	15/01/20	AN
A	DRAFT ISSUE	12/07/19	AN
REV	DESCRIPTION	DATE	APPRVD

STATUS:

FOR APPROVAL



ROCK CHUTE SPECIFICATION TABLE				
CHUTE ELEMENT	UNITS	ROCK CHUTE 1	ROCK CHUTE 2	ROCK CHUTE 3
CHUTE LENGTH	m	26	26	26
CHUTE DROP	m	1	1	1
CHUTE WIDTH	m	6	6	6
UPSTREAM FACE LENGTH	m	3.75	2.5	2.5
UPSTREAM FACE SLOPE	m/m	1V:2.5H	1V:2.5H	1V:2.5H
CREST LENGTH	m	2	2	2
CREST CUT OFF WALL DEPTH	m	2.4	2.4	2.4
CREST CUT OFF WALL LENGTH	m	1.2	1.2	1.2
APRON LENGTH	m	5	5	5
APRON CUT OFF WALL DEPTH	m	2.4	2.4	2.4
APRON CUT OFF WALL LENGTH	m	1.2	1.2	1.2
ABUTMENT PROTECTION HEIGHT	m	2	2	2
ABUTMENT PROTECTION SLOPE	m/m	1V:2.5H	1V:2.5H	1V:2.5H
ABUTMENT PROTECTION THICKNESS	m	1.2	1.2	1.2
UPPER BATTER SLOPE WHERE CUT	m/m	1V:2.5H	1V:2.5H	1V:2.5H
UPPER BATTER SLOPE WHERE FILL	m/m	1V:20H	1V:20H	1V:20H
POOL TOP WIDTH	m	6	6	6
POOL TOP LENGTH	m	5	5	5
POOL DEPTH	m	1	1	1
POOL SIDE SLOPES	m/m	1V:2.5H	1V:2.5H	1V:2.5H
POOL APRON LENGTH	m	1	1	1
SIZE OF ROCK PROTECTION, D50	mm	600	600	600
ROCK PROTECTION THICKNESS	m	1.2	1.2	1.2
QUANTITY OF ROCK	m ³	814	789	789
	tonnes	1,954	1,894	1,894
GRANULAR FILTER MATERIAL SIZE	mm	25	25	25
GRANULAR FILTER LAYER THICKNESS	m	0.1	0.1	0.1
QUANTITY OF GRANULAR FILTER MATERIAL	m ³	55	53	53
	tonnes	88	85	85
LENGTH OF GEOTEXTILE (4.0 m wide roll)	m	37	37	37
EXCAVATION (CUT)	m ³	958	995	1,039
SELECT FILL FOR FOUNDATION AND UPPER BATTERS (FILL)	m ³	195	131	11
TOPSOIL FOR UPPER BATTERS	m ³	64	25	64

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

SARA ref: 2001-15087 SDA

Date: 20 February 2020

SITE: TEN MILE CREEK
TITLE: REEF TRUST IV STREAM BANK EROSION REMEDIATION
TYPICAL SECTIONS

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SCALE @ A3	DRAWN DATE	DRAWN	DESIGNED	APPRVD	APPRVD DATE
-	12/07/19	TB	JA	AN	12/07/19
PROJECT NO.	DRAWING NO.	REVISION	SHEET NO.	FILE NAME	
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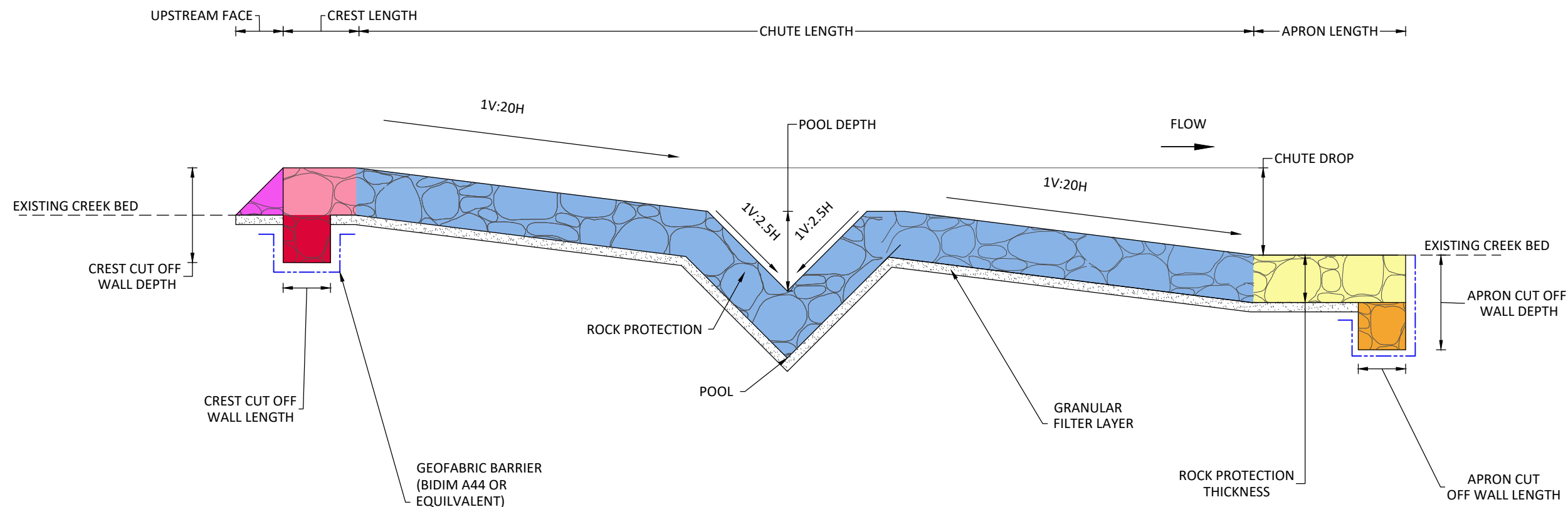
CLIENT:

B	FOR APPROVAL	15/01/20	AN
A	DRAFT ISSUE	12/07/19	AN
REV	DESCRIPTION	DATE	APPRVD

STATUS:

FOR APPROVAL

LEGEND	
CREST	APRON
CREST CUT OFF WALL	APRON CUT OFF WALL
CHUTE FACE	ABUTMENTS
UPSTREAM FACE	



ROCK CHUTE SECTION A

PLANS AND DOCUMENTS
referred to in the
DEVELOPMENT APPROVAL



SARA ref: 2001-15087 SDA

Date: 20 February 2020

SITE:
TEN MILE CREEK
TITLE:
**REEF TRUST IV STREAM BANK EROSION REMEDIATION
TYPICAL SECTIONS**

SCALE @ A3	DRAWN DATE	DRAWN	DESIGNED	APPRVD	APPRVD DATE
-	12/07/19	TB	JA	AN	12/07/19
PROJECT NO.	DRAWING NO.	REVISION	SHEET NO.	FILE NAME	
18060	009	B	9	18060 (2).dwg	

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CLIENT:



REV	DESCRIPTION	DATE	APPRVD
B	FOR APPROVAL	15/01/20	AN
A	DRAFT ISSUE	12/07/19	AN

STATUS:

FOR APPROVAL

LEGEND

 CREST	 APRON
 CREST CUT OFF WALL	 APRON CUT OFF WALL
 CHUTE FACE	
 UPSTREAM FACE	