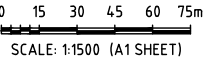
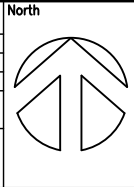


NOT FOR CONSTRUCTION



REV	DATE	DES.	DRN.	APP.	REVISION DETAILS
00	04/07/22	S.B.	S.B.	J.A.	ISSUE FOR PLANNING PROPOSAL
B	30/05/22	S.B.	S.B.	J.A.	MINOR AMENDMENTS
A	20/05/22	S.B.	S.B.	J.A.	DRAFT ISSUE

DRAWING STATUS	
DESIGN BY	S.B.
DRAWN BY	S.B.
FINAL APPROVAL	J.A.
SCALE:	1:1500
(on A1 Original)	
PP	



CLIENT
**GEOFFREY GILBERT, ASHLEY
GILBERT & SALLIE ZILKO**

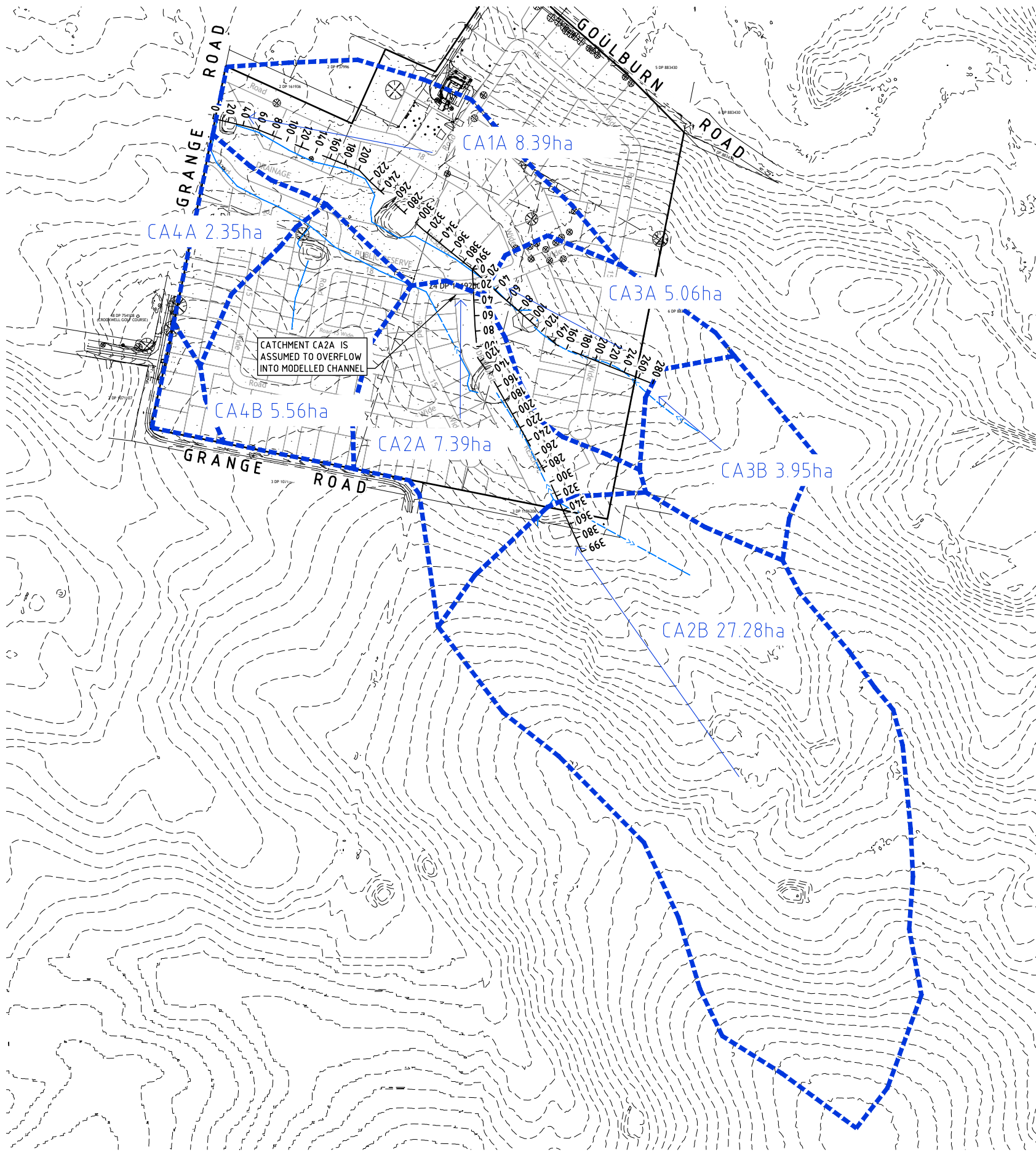


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(f) 02 4862 3088
email: reception@seec.com.au
WWW.SEEC.COM.AU

PROJECT TITLE
**PLANNING PROPOSAL FOR THE
SUBDIVISION OF LOT 24 DP1119250
4273 GOULBURN ROAD
CROOKWELL NSW 2583**

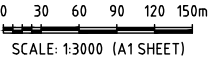
DRAWING TITLE PRELIMINARY FLOOD ASSESSMENT EXISTING SITE PLAN			
PROJECT NO. 22000064	SUB-PR NO. P01	DRAWING NO. STW01	REV 00

NOT FOR CONSTRUCTION



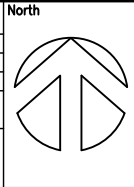
LEGEND:

- CATCHMENT BOUNDARIES
- CATCHMENT AREA
- DIRECTION OF SURFACE WATER FLOW



REV	DATE	DES.	DRN.	APP.	REVISION DETAILS
00	04/07/22	S.B.	S.B.	J.A.	ISSUE FOR PLANNING PROPOSAL
B	30/05/22	S.B.	S.B.	J.A.	MINOR AMENDMENTS
A	20/05/22	S.B.	S.B.	J.A.	DRAFT ISSUE

DRAWING STATUS	
DESIGN BY	S.B.
DRAWN BY	S.B.
FINAL APPROVAL	J.A.
SCALE:	1:3000
(on A1 Original)	
PP	



CLIENT

GEOFFREY GILBERT, ASHLEY
GILBERT & SALLIE ZILKO

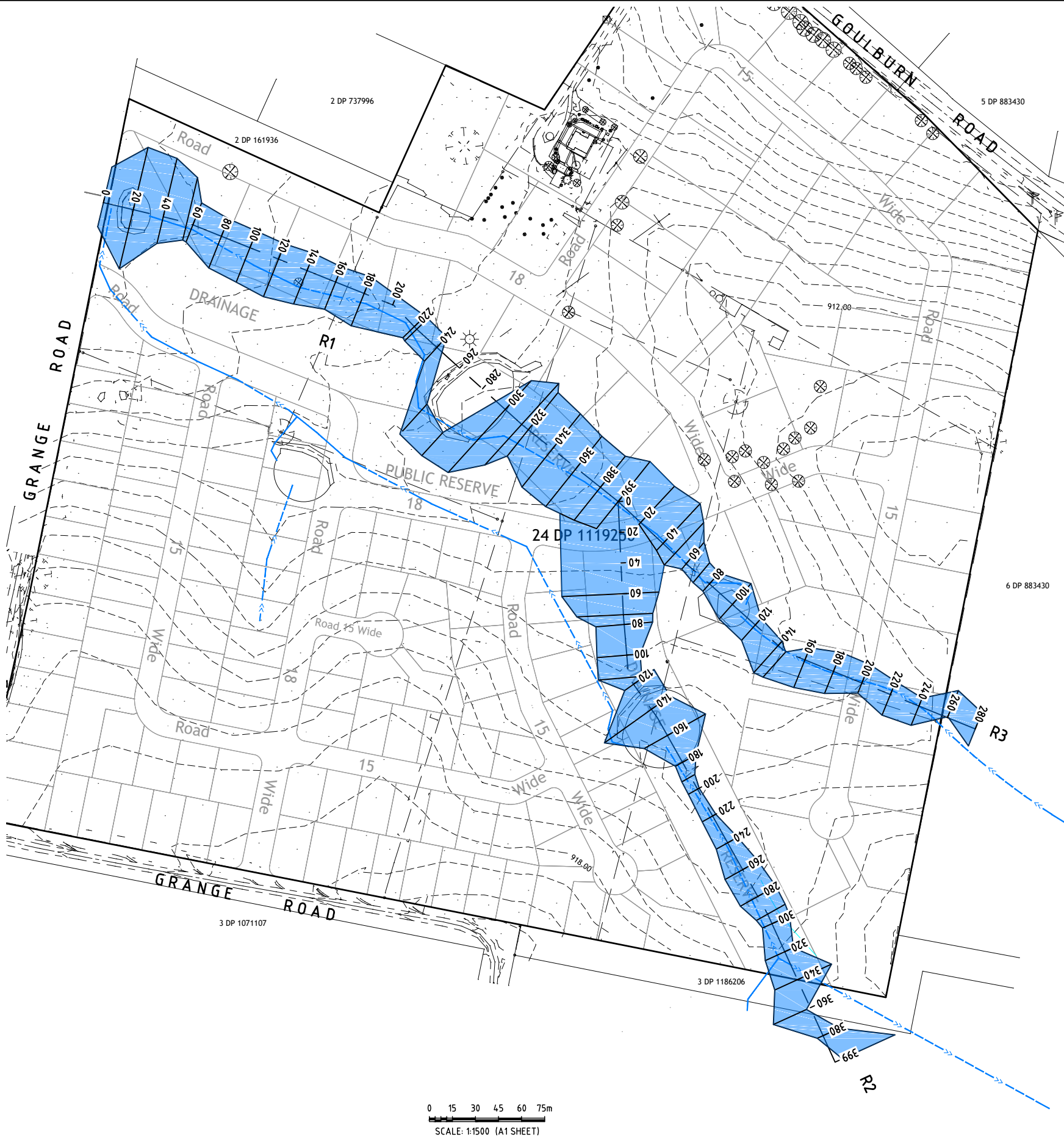
Suites 7 & 8, 68-70 Station Street
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PROJECT TITLE

PLANNING PROPOSAL FOR THE
SUBDIVISION OF LOT 24 DP1119250
4273 GOULBURN ROAD
CROOKWELL NSW 2583

DRAWING TITLE			
PRELIMINARY FLOOD ASSESSMENT PRE-DEVELOPMENT CATCHMENT PLAN			
PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
22000064	P01	STW02	00

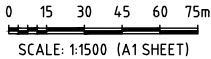
NOT FOR CONSTRUCTION



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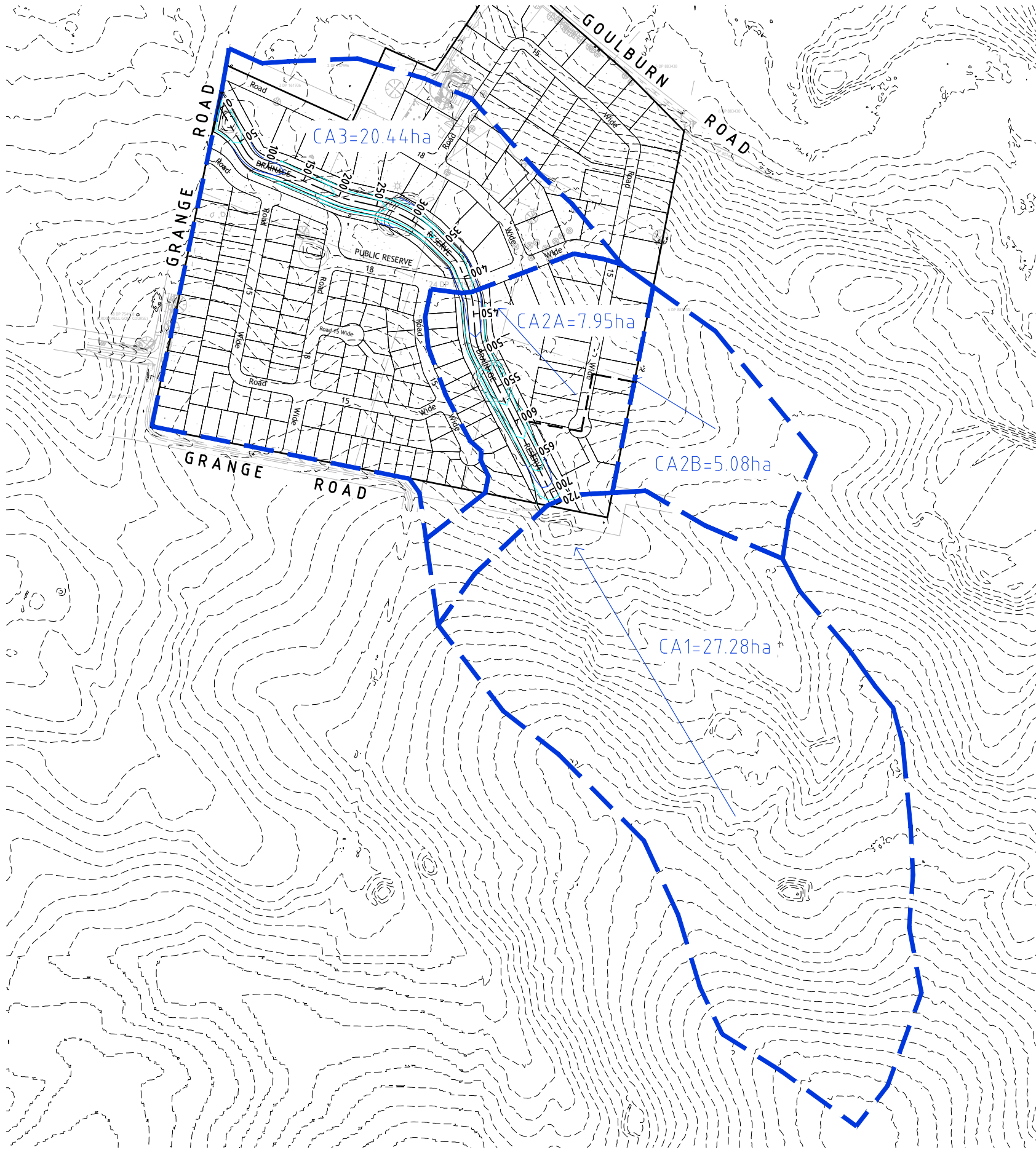
- 100 YEAR ARI FLOOD EXTENT
- NATURAL DRAINAGE CHANNEL
- R1 DRAINAGE REACH IDENTIFICATION
- LOT BOUNDARY
- EXISTING CONTOUR (1m INTERVALS)

1% AEP (100-year ARI) Pre Development Flood Modelling Results											
River	River Sta	Q Total (m3/s)	Min Ch (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Are (m2)	Top Width (m)	Froude # Chl
HEC-R3	279.56	0.34	914.29	914.36	914.35	914.37	0.00854	0.36	0.94	23.38	0.58
HEC-R3	260	0.34	914	914.06	914.06	914.08	0.03161	0.59	0.57	18.34	1.06
HEC-R3	240	0.34	913.48	913.54	913.53	913.55	0.01252	0.44	0.77	19.09	0.7
HEC-R3	220	0.34	913.25	913.34	913.35	913.35	0.00824	0.35	0.95	23.63	0.57
HEC-R3	200	0.66	912.96	913.05	913.05	913.07	0.01914	0.64	1.04	20.19	0.9
HEC-R3	180	0.66	912.66	912.74	912.75	912.75	0.01353	0.5	1.33	28.79	0.74
HEC-R3	160	0.66	912.27	912.36	912.36	912.38	0.02611	0.62	1.08	27.88	1
HEC-R3	146.406	0.66	911.98	912.07	912.05	912.08	0.00964	0.5	1.32	22.02	0.65
HEC-R3	140	0.66	911.91	911.98	911.98	912	0.01829	0.56	1.19	27.51	0.85
HEC-R3	120	0.66	911.55	911.65	911.67	911.67	0.01483	0.6	1.1	19.15	0.81
HEC-R3	100	0.66	911.38	911.45	911.45	911.45	0.00825	0.42	1.59	31.06	0.59
HEC-R3	80	0.66	911.11	911.23	911.25	911.25	0.01331	0.63	1.05	15.79	0.78
HEC-R3	71.283	0.66	911.03	911.13	911.14	911.14	0.00974	0.56	1.18	16.78	0.68
HEC-R3	60	0.66	910.87	910.98	910.99	910.99	0.01913	0.61	1.09	22.65	0.89
HEC-R3	50.052	0.66	910.8	910.89	910.9	910.9	0.00566	0.35	1.93	37.65	0.49
HEC-R3	40	0.66	910.7	910.77	910.77	910.78	0.02829	0.56	1.19	38.04	1.01
HEC-R3	20	0.66	910.43	910.56	910.51	910.56	0.00249	0.28	2.36	33.81	0.34
HEC-R2	398.899	1.68	918.07	918.18	918.18	918.22	0.02001	0.89	2.04	32.45	0.99
HEC-R2	380	1.68	917.48	917.61	917.63	917.69	0.04032	1.28	1.32	15.78	1.41
HEC-R2	360	1.68	916.16	916.83	916.36	916.83	4.6E-05	0.14	11.81	23.63	0.06
HEC-R2	340	1.68	916.7	916.8	916.8	916.82	0.02356	0.74	2.26	40.61	1.01
HEC-R2	320	1.68	916.1	916.27	916.28	916.32	0.02698	1.03	1.64	20.18	1.15
HEC-R2	300	1.68	915.45	915.6	915.62	915.67	0.03925	1.17	1.44	19.33	1.37
HEC-R2	293.151	1.68	915.26	915.44	915.42	915.47	0.01156	0.78	2.17	21.5	0.78
HEC-R2	280	1.68	915.09	915.23	915.23	915.27	0.02231	0.87	1.93	26.49	1.03
HEC-R2	260	1.68	914.69	914.8	914.8	914.84	0.023	0.9	1.86	24.59	1.05
HEC-R2	240	1.68	914.3	914.45	914.44	914.5	0.01604	0.97	1.74	15.86	0.93
HEC-R2	220	1.68	913.81	914.09	914.09	914.16	0.01705	1.18	1.43	10.09	1
HEC-R2	200	1.68	913.27	913.51	913.55	913.65	0.04126	1.68	1	8.12	1.52
HEC-R2	190.855	1.68	913.02	913.36	913.33	913.41	0.01031	1.03	1.64	9.77	0.8
HEC-R2	180	1.68	913.03	913.34	913.35	913.35	0.00219	0.54	3.11	15.28	0.38
HEC-R2	160	1.68	913.08	913.34	913.34	913.34	0.00027	0.19	8.92	45.8	0.13
HEC-R2	140	2.19	913	913.23	913.23	913.31	0.01673	1.21	1.81	41.18	1
HEC-R2	120	2.19	912.15	912.27	912.33	912.51	0.17128	2.17	1.01	16.14	2.77
HEC-R2	114.608	2.19	912.09	912.23	912.22	912.27	0.01322	0.8	2.72	28.31	0.83
HEC-R2	100	2.19	911.8	911.98	911.98	912.02	0.0214	0.93	2.35	28.23	1.03
HEC-R2	80	2.19	911.5	911.64	911.63	911.67	0.01171	0.7	3.14	37.02	0.76
HEC-R2	73.68	2.19	911.44	911.57	911.55	911.59	0.01342	0.65	3.39	49.45	0.79
HEC-R2	60	2.19	911.22	911.33	911.33	911.35	0.02288	0.69	3.19	63.27	0.98
HEC-R1	394.761	2.77	910.24	910.41	910.38	910.43	0.00921	0.6	4.58	55.72	0.67
HEC-R1	380	2.77	910.07	910.19	910.19	910.22	0.02253	0.81	3.44	53.27	1.01
HEC-R1	360	2.77	909.86	910.02	909.97	910.03	0.00423	0.47	5.89	58.41	0.47
HEC-R1	340	2.77	909.69	909.83	909.83	909.86	0.02346	0.77	3.59	60.93	1.02
HEC-R1	320	2.77	909.32	909.56	909.52	909.57	0.00568	0.54	5.15	51.91	0.55
HEC-R1	314.415	2.77	909.34	909.54	909.55	909.55	0.00333	0.41	6.82	70.18	0.42
HEC-R1	300	3.22	909.33	909.5	909.45	909.5	0.00299	0.41	8.15	81.46	0.4
HEC-R1	280	3.22	909.13	909.32	909.31	909.38	0.0155	1.07	2.89	20.59	0.94
HEC-R1	260	3.22	908.8	909.03	909.03	909.1	0.01332	1.27	3.19	26.56	0.93
HEC-R1	240	3.22	908.02	908.12	908.19	908.41	0.18122	2.41	1.33	19.04	2.91
HEC-R1	222.342	3.22	907.6	907.83	907.83	907.9	0.01788	1.16	2.78	20.97	1.02
HEC-R1	220	3.22	907.56	907.79	907.79	907.86	0.01794	1.18	2.73	20.18	1.02
HEC-R1	180	3.22	906.89	907.12	907.09	907.15	0.00994	0.8	4.03	34.27	0.74
HEC-R1	160	3.22	906.67	906.87	906.86	906.92	0.01443	0.95	3.4	29.61	0.89
HEC-R1	140	3.22	906.4	906.56	906.55	906.6	0.01736	0.93	3.46	35.46	0.95
HEC-R1	120	3.22	906.01	906.19	906.19	906.23	0.01953	0.95	3.4	37	1
HEC-R1	100	3.22	905.62	905.81	905.79	905.85	0.01099	0.81	3.98	35.69	0.77
HEC-R1	80	3.22	905.3	905.51	905.51	905.56	0.01978	0.98	3.29	34.44	1.01
HEC-R1	60	3.22	904.88	905.1	905.1	905.15	0.02037	1.08	2.97	27.39	1.05
HEC-R1	55.817	3.22	904.82	905.08	905.02	905.1	0.00576	0.63	5.14	41.69	0.57
HEC-R1	40	3.22	904.82	905.02	905.03	905.03	0.00332	0.48	6.77	56.84	0.43
HEC-R1	20	3.22	904.58	904.97	904.87	904.98	0.00191	0.41	7.87	78.35	0.34
HEC-R1	0	3.22	904.55	904.83	904.83	904.88	0.02002	0.98	3.28	34.39	1.02



REV	DATE	DES.	DRN.	APP.	REVISION DETAILS	DRAWING STATUS	North	CLIENT	PROJECT TITLE	DRAWING TITLE
						DESIGN BY		GEOFFREY GILBERT, ASHLEY GILBERT & SALLIE ZILKO	PLANNING PROPOSAL FOR THE SUBDIVISION OF LOT 24 DP1119250 4273 GOULBURN ROAD CROOKWELL NSW 2583	PRELIMINARY FLOOD ASSESSMENT PRE-DEVELOPMENT FLOOD EXTENTS PLAN
						S.B.				
					DRAWN BY	S.B.				
					FINAL APPROVAL	J.A.				
					SCALE: (on A1 Original)	1:1500				
00	04/07/22	S.B.	S.B.	J.A.	ISSUE FOR PLANNING PROPOSAL	PP				
B	30/05/22	S.B.	S.B.	J.A.	MINOR AMENDMENTS					
A	20/05/22	S.B.	S.B.	J.A.	DRAFT ISSUE					
 Suites 7 & 8, 68-70 Station Street PO Box 1098, Bowral NSW 2576. (t) 02 4862 1633 (f) 02 4862 3088 email: reception@seec.com.au WWW.SEEC.COM.AU PROJECT TITLE										
PROJECT NO. 22000064 SUB-PR NO. P01 DRAWING NO. STW03 REV 00										

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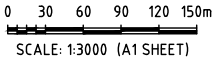


LEGEND:

--- CATCHMENT BOUNDARIES

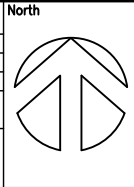
CA = 50Ha CATCHMENT AREA

→ DIRECTION OF SURFACE WATER FLOW



REV	DATE	DES.	DRN.	APP.	REVISION DETAILS
00	04/07/22	S.B.	S.B.	J.A.	ISSUE FOR PLANNING PROPOSAL
B	30/05/22	S.B.	S.B.	J.A.	MINOR AMENDMENTS
A	20/05/22	S.B.	S.B.	J.A.	DRAFT ISSUE

DRAWING STATUS	
DESIGN BY	S.B.
DRAWN BY	S.B.
FINAL APPROVAL	J.A.
SCALE:	1:3000
(on A1 Original)	
PP	



CLIENT

GEOFFREY GILBERT, ASHLEY
GILBERT & SALLIE ZILKO

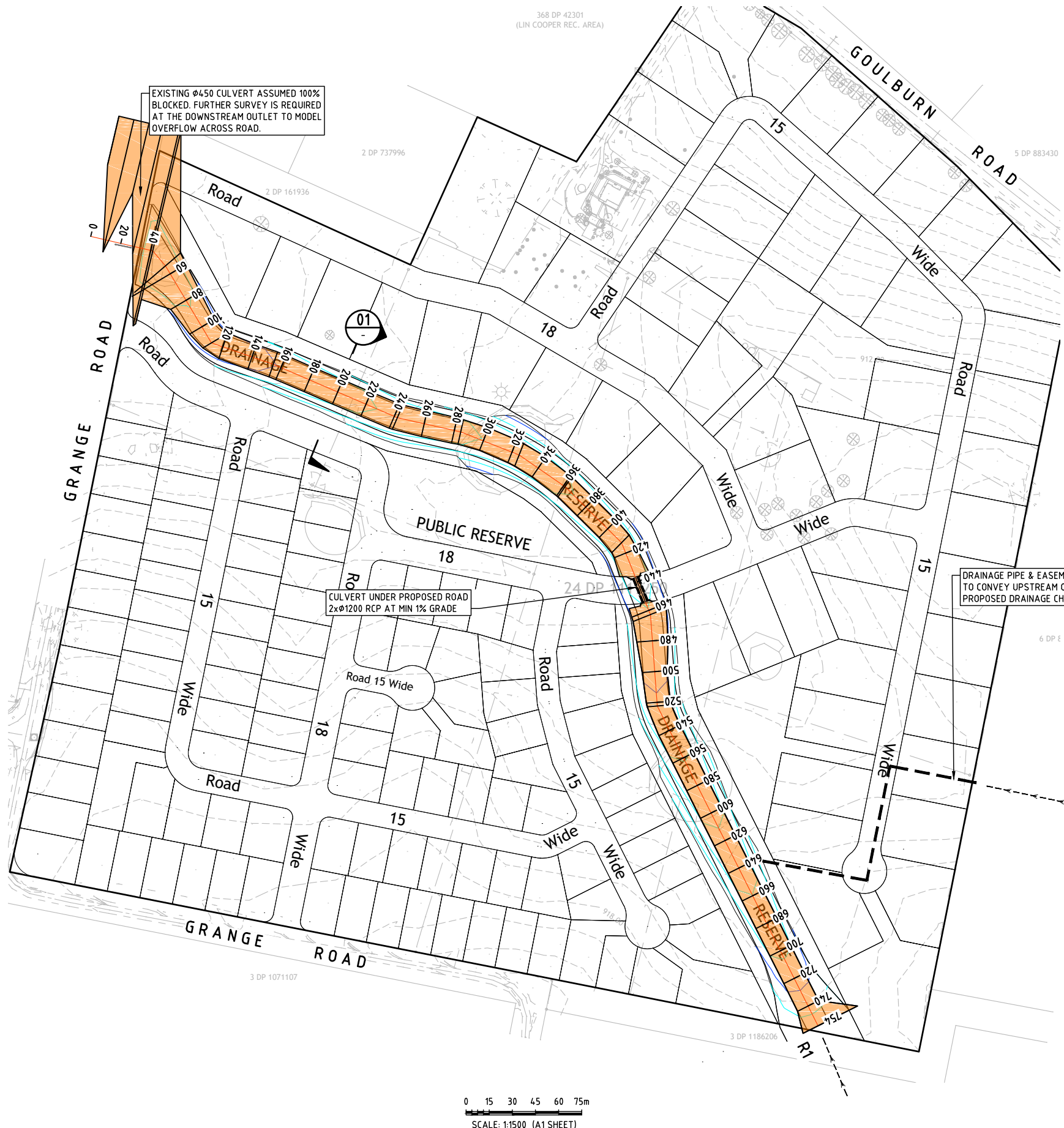
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PROJECT TITLE

PLANNING PROPOSAL FOR THE
SUBDIVISION OF LOT 24 DP1119250
4273 GOULBURN ROAD
CROOKWELL NSW 2583

DRAWING TITLE			
PRELIMINARY FLOOD ASSESSMENT POST DEVELOPMENT CATCHMENT PLAN			
PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
22000064	P01	STW04	00

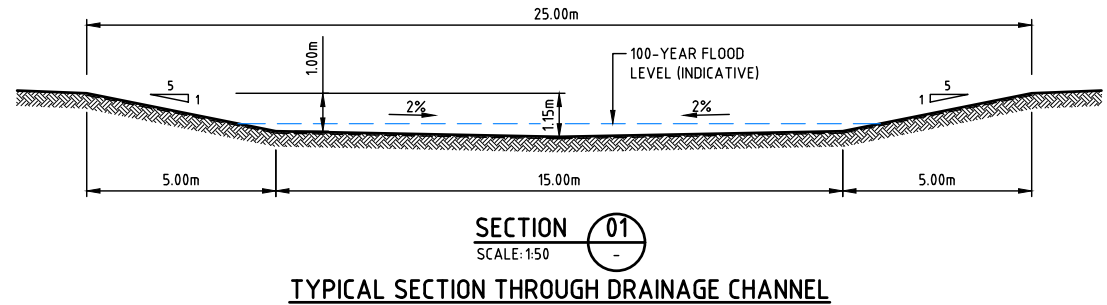
NOT FOR CONSTRUCTION



- POST-DEVELOPMENT FLOOD MODEL NOTES**
1. A HEC-RAS MODEL WAS DEVELOPED FOR THE POST DEVELOPMENT SCENARIO INCORPORATING A PRELIMINARY 3D MODEL OF THE POST DEVELOPMENT CHANNEL.
 2. MANNINGS RUNOFF COEFFICIENTS SET AT 0.05 FOR GRASSED/PREDEVELOPED AREAS & 0.02 FOR DEVELOPED AREAS
 3. FUTURE BUILDING ENVELOPES TO BE SET A MINIMUM OF 0.5m ABOVE THE ADJACENT 1% AEP (100-YEAR ARI) FLOOD LEVEL.

LEGEND:

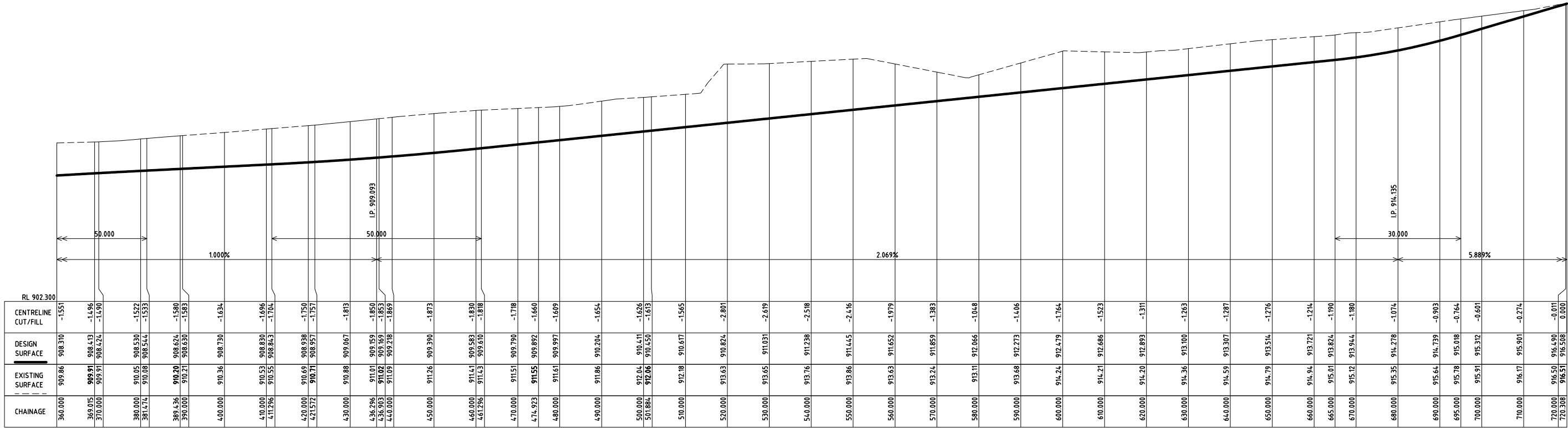
- 1% AEP (100-YEAR ARI) POST-DEVELOPMENT FLOOD EXTENT
- NATURAL DRAINAGE CHANNEL
- R1 DRAINAGE REACH IDENTIFICATION
- LOT BOUNDARY
- PROPOSED CONTOUR (1m INTERVALS)
- EXISTING CONTOUR (1m INTERVALS)



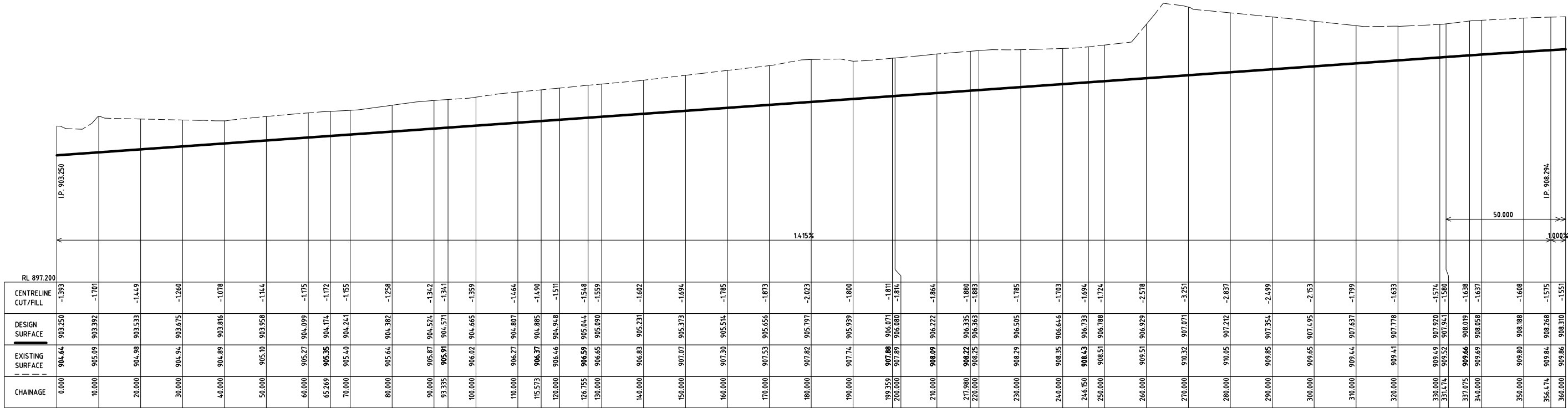
1% AEP (100-year ARI) Post Development Flood Modelling Results												
Reach	River Sta	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude #	Chl
R1	754.422	1.68	916.51	916.58	916.59	916.62	0.040006	1	1.83	39.52	1.32	
R1	740	1.68	915.66	915.78	915.81	915.89	0.064967	1.49	1.13	15.37	1.76	
R1	720	1.68	914.55	914.71	914.73	914.80	0.046016	1.35	1.24	15.09	1.51	
R1	700	1.68	913.85	914.02	914.03	914.09	0.02766	1.16	1.45	15.2	1.2	
R1	680	1.68	913.43	913.61	913.61	913.67	0.019125	1.03	1.63	15.33	1.01	
R1	660	1.68	913.02	913.19	913.20	913.25	0.022294	1.08	1.55	15.28	1.09	
R1	640	1.68	912.60	912.78	912.78	912.84	0.01944	1.04	1.62	15.32	1.02	
R1	620	1.68	912.19	912.37	912.37	912.43	0.022201	1.08	1.55	15.29	1.08	
R1	600	1.98	911.77	911.97	911.97	912.03	0.01813	1.08	1.83	15.46	1	
R1	580	1.98	911.36	911.55	911.56	911.62	0.023534	1.17	1.69	15.37	1.13	
R1	560	1.98	910.95	911.14	911.14	911.20	0.020498	1.12	1.76	15.42	1.06	
R1	540	1.98	910.53	910.72	910.73	910.79	0.020927	1.13	1.75	15.41	1.07	
R1	522.344	1.98	910.18	910.37	910.37	910.43	0.019464	1.1	1.8	15.71	1.03	
R1	520	1.98	910.13	910.32	910.32	910.38	0.021778	1.14	1.74	15.57	1.09	
R1	500	2.65	909.71	909.99	909.93	910.02	0.006367	0.87	3.04	16.23	0.64	
R1	480	2.65	909.33	910.00		910.00	0.000143	0.25	10.4	20.26	0.11	
R1	462.943	2.65	909.06	910.00		910.00	0.000038	0.16	16.33	23.16	0.06	
R1	460	2.65	909.02	910.00	909.24	910.00	0.000033	0.15	17.15	23.4	0.06	
R1	445 Culvert											
R1	420	2.65	908.59	908.84		908.89	0.009675	0.99	2.67	16.03	0.78	
R1	412.726	2.65	908.52	908.77		908.82	0.01	1	2.66	16.3	0.79	
R1	400	2.65	908.39	908.63	908.61	908.68	0.011742	1.05	2.51	15.9	0.85	
R1	380	2.65	908.15	908.38	908.37	908.44	0.012645	1.08	2.45	15.86	0.88	
R1	361.147	2.65	907.89	908.12	908.11	908.18	0.014527	1.12	2.36	15.9	0.93	
R1	360	2.65	907.87	908.10	908.09	908.17	0.014597	1.13	2.35	15.88	0.93	
R1	340	2.65	907.59	907.82	907.81	907.88	0.013768	1.11	2.39	15.82	0.91	
R1	325.003	2.65	907.38	907.60	907.60	907.67	0.014823	1.13	2.34	15.9	0.94	
R1	320	2.65	907.30	907.54	907.53	907.60	0.011947	1.06	2.5	15.95	0.85	
R1	300	2.65	907.02	907.24	907.24	907.32	0.017332	1.19	2.23	15.72	1.01	
R1	284.23	2.65	906.80	907.08	907.02	907.12	0.005239	0.82	3.24	16.35	0.59	
R1	280	2.65	906.74	907.08		907.10	0.002411	0.64	4.14	16.89	0.41	
R1	260	7.03	906.46	906.81	906.81	906.94	0.014317	1.61	4.37	17.03	1.01	
R1	242.131	7.03	906.20	906.55	906.56	906.69	0.014462	1.61	4.36	17.08	1.02	
R1	240	7.03	906.17	906.53	906.53	906.66	0.014393	1.61	4.37	17.07	1.02	
R1	220	7.03	905.89	906.24	906.24	906.37	0.015115	1.64	4.3	16.98	1.04	
R1	200	7.03	905.61	905.95	905.96	906.09	0.01683	1.69	4.15	16.9	1.09	
R1	180	7.03	905.32	905.65	905.68	905.82	0.021022	1.82	3.87	16.73	1.21	
R1	160	7.03	905.04	905.39	905.39	905.53	0.014263	1.61	4.38	17.03	1.01	
R1	154.596	7.03	904.96	905.32	905.32	905.45	0.014324	1.61	4.37	17.04	1.01	
R1	140	7.03	904.76	905.11	905.11	905.24	0.013939	1.59	4.41	17.05	1	
R1	120	7.03	904.48	904.84	904.83	904.96	0.011317	1.48	4.74	17.5	0.91	
R1	112.126	7.03	904.39	904.73	904.73	904.86	0.014249	1.57	4.49	18.15	1.01	
R1	100	7.03	904.21	904.69	904.56	904.75	0.003805	1.05	6.71	18.37	0.55	
R1	80	7.03	903.93	904.70		904.72	0.0005	0.53	13.29	22.12	0.22	
R1	60	7.03	903.56	904.71		904.71	0.000077	0.24	29.7	40.66	0.09	
R1	53.988	7.03	903.47	904.71		904.71	0.000047	0.21	34.03	39.15	0.07	
R1	41.259	7.03	903.23	904.71		904.71	0.000013	0.12	62.86	94.84	0.04	
R1	40	7.03	903.19	904.71		904.71	0.000011	0.11	66.63	103.15	0.04	
R1	29	7.03	904.53	904.63	904.63	904.70	0.015263	0.59	6.15	43.92	0.81	
R1	20	7.03	904.26	904.37	904.39	904.47	0.029261	0.84	5.14	46.47	1.13	
R1	10	7.03	903.89	904.05	904.07	904.12	0.033897	1.12	6.04	73.27	1.28	
R1	0	7.03	903.45	903.45	903.51	903.65	0.066141	0.09	3.57	32.37	0.89	

REV	DATE	DES.	DRN.	APP.	REVISION DETAILS	DRAWING STATUS	North	CLIENT	PROJECT TITLE	DRAWING TITLE	PROJECT NO.	SUB-PR NO.	DRAWING NO.	REV
						DESIGN BY S.B.		GEOFFREY GILBERT, ASHLEY GILBERT & SALLIE ZILKO	PLANNING PROPOSAL FOR THE SUBDIVISION OF LOT 24 DP1119250 4273 GOULBURN ROAD CROOKWELL NSW 2583	PRELIMINARY FLOOD ASSESSMENT POST-DEVELOPMENT FLOOD EXTENTS PLAN	22000064	P01	STW05	00
						DRAWN BY S.B.								
						FINAL APPROVAL J.A.								
						SCALE: (on A1 Original) 1:1500								
00	04/07/22	S.B.	S.B.	J.A.	ISSUE FOR PLANNING PROPOSAL									
B	30/05/22	S.B.	S.B.	J.A.	MINOR AMENDMENTS									
A	20/05/22	S.B.	S.B.	J.A.	DRAFT ISSUE									

NOT FOR CONSTRUCTION



LONGITUDINAL SECTION
Channel 1 CH 360.000 TO CH 720.308



LONGITUDINAL SECTION
Channel 1 CH 0.000 TO CH 360.000

SCALES: HORIZONTAL 1:500 VERTICAL 1:100
HORIZ 1:500 0 5 10 15 20 25m
VERT 1:100 0 1 2 3 4 5m

REV	DATE	DES.	DRN.	APP.	REVISION DETAILS	DRAWING STATUS	North	CLIENT	PROJECT TITLE	DRAWING TITLE
						DESIGN BY DRAWN BY FINAL APPROVAL SCALE: (on A1 Original)				PRELIMINARY FLOOD ASSESSMENT PROPOSED CHANNEL LONGITUDINAL SECTION
						S.B. S.B. J.A. 1:500H 1:100V				
00	04/07/22	S.B.	S.B.	J.A.	ISSUE FOR PLANNING PROPOSAL					
B	30/05/22	S.B.	S.B.	J.A.	MINOR AMENDMENTS					
A	20/05/22	S.B.	S.B.	J.A.	DRAFT ISSUE					
						PP				

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PLANNING PROPOSAL FOR THE
SUBDIVISION OF LOT 24 DP1119250
4273 GOULBURN ROAD
CROOKWELL NSW 2583

PROJECT NO.
22000064

SUB-PR NO.
P01

DRAWING NO.
STW06

REV
00