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# **CIVIL DOCUMENTATION FOR DEVELOPMENT APPLICATION**



DRB

CONSULTING

ENGINEERS

260 MAITLAND ROAD, MAYFIELD PO BOX 4105 KOTARA EAST 2305 P: (02) 4040 0580 E: hello@drbengineering.com.au ABN 64 625 755 482

CLIENT

TITLE

	PROJECT
PJE MANAGEMENT	RUF
COVER SHEET, DRAWING LIST AND LOCALITY PLAN	256 \

# **DRAWING LIST**

RAWING No.	DRAWING TITLE
V-001	COVER SHEET, DRAWING LIST AND LOCALITY PLA
V-051	GENERAL ARRANGEMENT PLAN
V-101	TYPICAL ROAD SECTIONS
V-151	CIVIL WORKS PLANS - SHEET 1
V-152	CIVIL WORKS PLANS - SHEET 2
V-153	CIVIL WORKS PLANS - SHEET 3
V-154	CIVIL WORKS PLANS - SHEET 4
V-155	CIVIL WORKS PLANS - SHEET 5
V-156	CIVIL WORKS PLANS - SHEET 6
V-201	CIVIL DETAILS - SHEET 1
V-151	ROAD LONG SECTIONS - SHEET 1
V-152	ROAD LONG SECTIONS - SHEET 2
V-153	ROAD LONG SECTIONS - SHEET 3
V-154	ROAD LONG SECTIONS - SHEET 4
V-301	SOIL AND WATER MANAGEMENT PLAN
√-302	SOIL AND WATER MANAGEMENT DETAILS
V-303	SOIL AND WATER MANAGEMENT NOTES
V-351	CATCHMENT PLAN PRE-DEVELOPED
V-352	CATCHMENT PLAN POST-DEVELOPED

	DRAWING STATUS	SHEET SIZE	
RAL SUBDIVISION	SCALE	DRAWN	
EINNOXTON ROAD,	PROJECT REF No.	DRAWING No.	SF REVISION
VACY. NSW. 2421.	200380	CIV-001	А



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_	CONSULTING ENGINEERS	

260 MAITLAND ROAD, MAYFIELD PO BOX 4105 KOTARA EAST 2305 P: (02) 4040 0580 E: hello@drbengineering.com.au ABN 64 625 755 482 CLIENT

	PJE MANAGEMENT	R
TITLE		
	TYPICAL ROAD SECTIONS	

PROJECT

RAL SUBDIVISION	DRAWING STATUS NOT FOR CON	SHEET SIZE	
	SCALE 0 0.5 1 : 50 (A1)	1 1.5 2 2.5m	DRAWN SF
LENNOXTON ROAD,	PROJECT REF No.	DRAWING No.	REVISION
VACY. NSW. 2421.	200380	CIV-101	А



	PROJECT	
PJE MANAGEMENT		F
CIVIL WORKS PLANS - SHEET 1		

	DRAWING STATUS NOT FOR CON	SHEET SIZE	
	SCALE 0 5 1 : 500 (A1)	10 15 20 25m	DRAWN SF
LENNOXTON ROAD,	PROJECT REF No.	DRAWING No.	REVISION
ACY. NSW. 2421.	200380	CIV-151	А



RAL SUBDIVISION	DRAWING STAT	TUS FOR CON	STRUCTIO	NC	SHEET SIZE A1
	SCALE 1 : 500 (A1)	0 5	10 15	20 25m	DRAWN
LENNOXTON ROAD,	PROJECT REF	No.	DRAWING N	۱o.	REVISION
VACY. NSW. 2421.	2003	880	CIV	′-152	А



	FILOJECT	
PJE MANAGEMENT		R
/IL WORKS PLANS - SHEET 3		



RAL SUBDIVISION	DRAWING STATUS NOT FOR CON	ISTRUCTION	SHEET SIZE
	SCALE 0 5 1 : 500 (A1)	10 15 20 25m	DRAWN SF
	PROJECT REF No.	DRAWING No.	REVISION
VACY. NSW. 2421.	200380	CIV-153	A



	PROJECT	DRAWING STATUS		SHEET SIZE
PJE MANAGEMENT	RURAL SUBDIVISION	NOT FOR CONSTRUCTION		A1
		SCALE 0 5	10 15 20 25m	DRAWN
		1 : 500 (A1)		SF
VIL WORKS PLANS - SHEET 4	VACY. NSW. 2421.	PROJECT REF No.	DRAWING No.	REVISION
		200380	CIV-154	А

![](_page_6_Figure_4.jpeg)

![](_page_7_Figure_0.jpeg)

PJE MANAGEMENT	
IL WORKS PLANS - SHEET 5	

![](_page_7_Figure_5.jpeg)

	DRAWING STATUS NOT FOR CON	ISTRUCTION	SHEET SIZE
	SCALE 0 5 1 : 500 (A1)	10 15 20 25m	DRAWN SF
	PROJECT REF No.	DRAWING No.	REVISION
ACY. NSW. 2421.	200380	CIV-155	А

![](_page_8_Figure_0.jpeg)

![](_page_8_Figure_5.jpeg)

SUBDIVISION	DRAWING STATUS NOT FOR CON	SHEET SIZE	
	SCALE 0 5 1 : 500 (A1)	10 15 20 25m	DRAWN SF
NNOXTON ROAD,	PROJECT REF No.	DRAWING No.	REVISION
SY. NSW. 2421.	200380	CIV-156	А

![](_page_9_Figure_0.jpeg)

# INTERALLOTMENT DRAINAGE SWALE DETAIL

SCALE 1:10 NOTE: FINAL DETAILS TO BE CONFIRMED AT SWC STAGE

IONS							This drawing is <u>not</u> approved for construction unless signed.	T
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![](_page_9_Picture_4.jpeg)

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TITLE

PJE MANAGEMENT	RUF
CIVIL DETAILS - SHEET 1	256

PROJECT

RURAL SUBDIVISION	DRAWING STATUS NOT FOR CON	STRUCTION	SHEET SIZE
	SCALE		DRAWN SF
256 LENNOX I ON ROAD, VACY_NSW_2421	PROJECT REF No.	DRAWING No.	REVISION
V/(01:1(0)():2121.	200380	CIV-201	A

![](_page_10_Figure_0.jpeg)

A 07.08.2024 SF BR ISSUED FOR DEVELOPMENT APPLICATION

REV DATE DRN CHK APP DRAWING STATUS

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82 00 VC

-1.22 -1.10 -1.01

31.11 31.23 31.28

**32.33** 32.33 32.29

167.36 170.00 171.38

167.36

49

57

52

30.74

32.26

-2.17

29.37

31.54

6

0 MAITLAND ROAD, MAYFIELD D BOX 4105 KOTARA EAST 2305 (02) 4040 0580

L=49.41 R=30.0

1.60%

+0.90 +0.91 +0.90 +0.88

31.70 31.65

**30.80** 30.77

216.78 220.00

216.78

CLIENT

31.80 31.77

30.90 30.86

210.00 212.38

+0.83

48

33.

68

õ õ

22

230

+0.73

31.86 31.86

31.13 31.11

200.00 200.59

TITLE **ROAD LONG SECTIONS - SHEET 1** 

PJE MANAGEMENT

+0.59

31.04 31.00

30.45 30.42

250.00 251.55

2

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59

LONGITUDINAL SECTION Ch 0.000 to Ch 322.027 SCALES: HORIZONTAL 1:500 VERTICAL 1:100 MC01

	260
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	P: (
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CONSULTING ENGINEERS	ABN

hello@drbengineering.com.au ABN 64 625 755 482

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-3.80%

+0.29

30.19 30.06

29.90 29.80

80.

8

.55

PROJECT

-0.39

43

2

8

2

L=125.25 B=283°22'21"

RUR 256 L

				~
+0.10	+0.07	+0.01	-0.06	-0.08
29.47	29.30	28.92	28.54	28.46
29.37	29.23	28.91	28.60	28.54
295.57	300.00	310.00	320.00	322.03

AL SUBDIVISION	DRAWING STATUS NOT FOR CONSTRUCTION		SHEET SIZE
	SCALE		DRAWN
LENNUXTUN KUAD,	PROJECT REF No.	DRAWING No.	REVISION
ACY. NSW. 2421.	200380	CIV-151	А

		NEW RC PIPE CULVERT AND PRECAST HEADWALLS. DETAIL TO BE PROVIDED AT SWC STAGE.	Ch 256.86 RL 26.23 Intersection with MC02	NEW RC PIPE CULVERT AND PRECAST HEADWALLS. DETAIL TO BE PROVIDED AT SWC STAGE.	NEW RC PIPE CULVERT AND PRECAST HEADWALLS. DETAIL TO BE PROVIDED AT SWC STAGE.
NEW RC PIPE CULVERT AND PRECAST HEADWALLS. DETAIL TO BE PROVIDED AT SWC STAGE.			Crest Ch 257.19 RL 26		
R.L. 12.00	4     50     00       50     00     0	3.52%	67 97 di 72 00 VC	-0.90%	90.00 VC 5.70%
CULY LITI COLOR CO	-0.07 -0.11 -0.11 -0.05 -0.04 -0.04 +0.49 +0.49 +0.49 +1.16 +1.16 +2.20	+1.92 +2.78 +2.78 +1.61 +1.59 +0.92 +0.55 +0.27	+0.14         +0.13         +0.15         +0.15         +0.11         +0.10         +1.09	+2.46 +1.81 +0.23 -0.23 -0.21 -0.12	+0.53 +0.53 +1.91 +1.91 +1.99 +1.99 +0.99
DESIGN 19:00	21.65 21.94 21.94 22.35 22.40 22.14 23.32 23.47 24 24.47 24 24.47	24.53 24.53 24.88 25.23 25.23 25.23 25.23 25.23 25.601	26.09           26.14           26.14           26.23           26.23           26.23           26.23           26.23           26.23           26.18           26.18           26.18           26.18           26.09           26.10	25.91 25.82 25.82 25.64 25.64 25.48 25.48 25.48 25.48	25.43 25.43 25.46 25.46 25.46 25.67 25.82 25.82 25.82 25.82 25.82
EXISTING         18.11         18.11         19.12           20.16         19.40         18.24         19.12           21.08         20.16         20.16         20.16           21.159         20.74         20.50         10.12	21.72         21.72           22.05         22.05           22.141         22.40           22.152         22.60           21.152         22.61	22.61 22.10 22.10 23.62 23.62 23.64 25.74 25.74	25.95 26.01 26.07 26.12 26.12 26.12 26.12 26.12 26.12 26.12 26.12 26.12 26.12 26.12 26.12 26.12 26.12 26.12 26.12 26.01	23.45 23.45 24.01 25.60 25.60 25.69 25.69	24.90 24.85 23.35 23.35 23.35 23.35 23.35 23.35 23.35 23.35 23.35 23.35 23.35
Here     Here     Here     Here     Here     Here     Here       100.00     80.00     80.00     100.00     100.00     100.00     100.00     100.00	103.41           103.61           110.00           110.00           120.00           121.35           146.35           150.00           150.00           160.00	180.00         180.00           190.00         200.00           210.00         230.00	235.87 240.00 250.00 257.19 256.86 257.19 257.19 257.19 257.19 257.19 257.10 257.00 270.00 270.00 270.00 270.00 270.00 280.00 280.00 270.00 270.00 270.00 280.00 200.000 200.000 200.000 200.000 200.000 200.000 200.00000000	300.00 310.00 330.00 348.03 350.00 348.03 350.00 350.00 350.00	360.00         360.00           390.00         370.00           393.03         393.03
ALIGNMENT         L=49.13           GEOMETRY         B=80°56'41"         49[13         L=54.28	L=137.69 B=74°43'27'		241.10	L=175.69 B=74°43'27"	
		LONGITUDINAL SECTION Ch 25.229 to Ch 400.000 SCALES: HORIZONTAL 1:500 VERTICAL 1:100 <u>MCO3</u>			
SZ     SZ     This drawing is not approximation unless       O     SZ     SZ	broved signed.	260 MAITLAND ROAD, MAYFIE PO BOX 4105 KOTARA EAST 2 P: (02) 4040 0580	D CLIENT 05 PJE MANAGEMENT TITLE	PROJECT RURAL SUBDIVISION	DRAWING STATUS     SHEET SIZE       NOT FOR CONSTRUCTION     A1       SCALE     DRAWN       SF
Image: Comparison of the comparison	This drawing and the information provided shall remain the property of DRB s Pty Ltd (DRB) and may not be used, copied or reproduced, in whole or part, r than that for which it was supplied without the prior consent of DRB. en produced in colour and may be incomplete if printed/copied in black & white. verified on-site before commencing work.	UKB       E: hello@drbengineering.com.au         CONSULTING ENGINEERS       ABN 64 625 755 482	ROAD LONG SECTIONS - SHEET 2	256 LENNOXTON ROAD, VACY. NSW. 2421.	PROJECT REF No.     DRAWING No.     REVISION       200380     CIV-152     A

												19.46 RL 30.29																												
R.L. 13.5	0.09	0.00 0.00 VC	19	1.35	1.24	5.70%		1.39	1.28	106	0.02 0.02	0.93	0.0	0.05	0.94	0.54			80.0				1.22	-4.10	0.43	0.74	0.75	0.45	0.13	0	0.20	0.52	96.0	1.59	5.60	3.71 Sag Ch 741.127 RL 23.24 Sag Ch 741.127 RL 23.24	3.69 3.50 3.50 3.50 5.50 5.50 5.50 5.50 5.50	NEW RC PIPE PRECAST HE TO BE PROV	E CULVERT AN ADWALLS. DE IDED AT SWC 5.50%	D TAIL STAGE.
DESIGN	26.00 26.33 26.33	26.60 26.73	27.21	27.64 27.75	28.31 28.32	28.85	29.30	29.66	29.94	30.14	30.26 30.26	30.29 30.29	30.25	30.12	30.02 29.91	29.62	29.27	29.25	28.84	28.43	28.02	27.61	27.20	26.79	26.38	25.97	25.56	25.15	24.74	24.33	24.25	23.95	23.65	23.43	23.30	23.24	23.28	23.39	23.59	23.87
EXISTING SURFACE	25.01 26.47	<b>27.42</b> 27.65	28.37	28.99 29.14	29.55 29.56 29.56	30.02	30.50	31.05	31.22	31.20	31.18 31.18	31.22 31.22	31.21	31.07	<b>30.96</b> 30.73	30.16	29.07	28.95	28.92	29.47	29.32	29.09	28.42	27.69	26.81	26.71	26.31	25.60	24.87	24.18	24.05	23.43	22.69	21.84	20.70	19.53 19.53	19.59 19.83	20.14	21.20	22.54
CHAINAGE	400.00	416.80	430.00	438.03 440.00	449.67 450.00	460.00	470.00	480.00	490.00	500.00	509.67 510.00	519.46 520.00	530.00	540.00	545.24 550.00	560.00	569 66	570.00	580.00	590.00	600.00	610.00	620.00	630.00	640.00	650.00	660.00	670.00	680.00	690.00	691.93	700.00	710.00	720.00	730.00	740.00	750.00	760.00	770.00	780.00
ALIGNMENT GEOMETRY	L=175.69 B=74°43'2	9 416.80						L=128.44 R=200.0	<u>.</u>						545 <u>.24</u>			SC	LONGI <sup>-</sup> Ch 400 ALES: HORIZC	TUDINAL SEC 0.000 to Ch 78 DNTAL 1:500 V <u>MC03</u>	CTION 80.000 VERTICAL 1:100	0					L=4 B=37	418.89 7°55'42"												
X O S Z S Z S Z S Z S Z S Z S Z S Z S Z S Z	SF DRN CHK	BR ISSUED	FOR DEVELOPMENT	F APPLICATION		This for ( ))))))))))	s drawing is <u>not</u> construction unle COPYRIGHT Consulting Engine or any purpose o This drawing has All dimensions to	approved ess signed. - This drawing eers Pty Ltd (DR other than that for been produced i be verified on-si	and the informa RB) and may not or which it was su in colour and ma site before comm	tion provided sha be used, copied o upplied without the ay be incomplete encing work.	Il remain the pro or reproduced, i e prior consent if printed/copied	Deperty of DRB in whole or part, of DRB. d in black & white	) e.				RB SULTING INEERS	_ 2 _ P _ P _ E	60 MAITLA 20 BOX 41 2: (02) 4040 5: hello@dr 4BN 64 625	AND ROA 05 KOTA 0 0580 rbenginee 5 755 482	AD, MAYFIE ARA EAST 2 ering.com.ac	ELD ( 2305 1 u	CLIENT TITLE ROA	P D LON(	JE MAN G SECT	IAGEME	ENT SHEE	Т 3	PROJECT	<u>R</u> 2	URAL 256 LEN VACY	SUBDI NOXTON (. NSW. 2	VISION N ROAD, 2421.	<u> </u>		)RAWING STAT NOT SCALE PROJECT REF 200	US FOR CONS No. 380	TRUCTION DRAWING NO. CIV-	153	SHEET SIZE A1 DRAWN SF REVISION A

![](_page_12_Picture_2.jpeg)

![](_page_13_Figure_0.jpeg)

REV DATE DRN CHK APP DRAWING STATUS

PO BOX 4105 KOTARA EAST 2305 P: (02) 4040 0580 E: hello@drbengineering.com.au ABN 64 625 755 482

DRB

CONSULTING ENGINEERS

260 MAITLAND ROAD, MAYFIELD

TITLE **ROAD LONG SECTIONS - SHEET 4** 

CLIENT

RUR

PJE MANAGEMENT

PROJECT

![](_page_13_Picture_6.jpeg)

							NEW PREC TO BI	RC PIPE CUL\ CAST HEADWA E PROVIDED A	VERT AND ALLS. DETAIL AT SWC STAGE																	
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						(																				
																	Q									
																	33.9									
																	<u> </u>									
																	60	00								
		$\rightarrow$												$\leftarrow$			00	C		>						
							1.70%															2.20%				
												$\mathbf{n}$														
.15	00.0	0.23	.51	).79 .93	.12	.40	.54	.40	.16	.93	.72	.71	.49	.44	.34	.22	.11	.03	.05	0.03	00.0	.01	.02	.01	50	.01
Ŷ	+	+ +	+	+ +	+	+	+	+	+	+	+	Ŷ	+	+	+	+	+ +	+	+	+ +	¥	Ŷ	Ŷ	Ŷ	+	¥
54	00	800		0 33	0	37	54	5	88	)5	5	52	6	12	90	4	0 33	<u></u>		52 55	-	6	5	<u>د</u>	22	22
31.2	31.5	31.6	31.8	32.0	32.2	32.3	32.5	32.7	32.8	33.0	33.2	33.2	33.3	33.4	33.5	33.7	33. <u>5</u> 34.0	34.1	34.3	34.5	34.7	34.9	35.2	35.4	35.6	35.8
1.39	1.50	<u>1.45</u> 1.45	1.35	<u>1.24</u> 1.17	1.08	0.97	1.00	1.31	1.72	2.12	2.50	2.51	2.90	3.01	3.22	3.52	3.82 3.93	4.10	4.28	4.60	4.77	5.00	5.23	5.44	5 64	5.86
с С	er en	ကက	с С	ი <b>ი</b>	с С	e C	က	с С	က	က	က်	c)	с) С	ς,	с С	с С	0 N	Ċ,	с,	ന്ന്	τ,	က	က	r v	(C)	۳ ۳
8	8	10 0	8	3 0	8	8	8	8	8	8	57	8	8	6	8	8	0 0	8	8	<u> </u>	8	8	8	8	6	8
920.(	930.(	939. 940.(	950.(	<u>960.(</u> 964. <sup>7</sup>	970.(	980.(	).066	000.(	010.(	020.(	029.(	030.	040.(	043.	050.(	060.(	070.( 073. <u>;</u>	080.(	.060	<u>100.(</u>	110.(	120.(	130.(	140.(	150 (	160.(
	-		-					7	7	-	-	-	÷	-	<u> </u>	-	~ ~	~	~		-	~	~	~	<del>、</del>	~
				964	1.13			L=65.54 R=50.0			1029	9.67							L=1	76.41						
					-						L								B=113	3°01'47"						
	LONGITUDINAL SECTION																									
				Ch I SCALES: HOR	780.000 to Ch 7	1160.000	1.100																			

RURAL SUBDIVISION	DRAWING STATUS	STRUCTION	SHEET SIZE
	SCALE		DRAWN
VACY. NSW. 2421.	PROJECT REF No. 200380	DRAWING No. CIV-154	

![](_page_14_Figure_0.jpeg)

1

LOT 210 -1.02ha~~~~

LOT 211-

1.14ha

mon manda

![](_page_14_Figure_6.jpeg)

RAL SUBDIVISION	DRAWING STATUS NOT FOR CON	STRUCTION	SHEET SIZE
	SCALE 0 25 1 : 2500 (A1)	50 75 100 125m	DRAWN SF
LENNOXTON ROAD,	PROJECT REF No.	DRAWING No.	REVISION
VACY. NSW. 2421.	200380	CIV-301	А

								SECTION ( A	$\rightarrow$	
							СС	ONSTRUCTION NOTES	/	
							1.	CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE SITE.	ECONTOURS OF TH	HE
							2.	PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL A BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.	ANY GAPS BETWE	EN
							3.	ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.		
							4.	EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2 METRE ST STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUS THEM 600mm INTO THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. W ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFE	TAR PICKETS OR SLY LAID BALE. DR /HERE STAR PICKE TY CAPS.	RIVE ETS
							5.	WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER ARE PLACED 1 TO 2 METRES DOWNSLOPE FROM THE TOE.	₹, ENSURE THE BA	LES
							6.	ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RE REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.	ETAINED - THEY CO	OULD
								STRAW BALE FILTER (SD 6-7)		
ONS								This drawing is <u>not</u> approved for construction unless signed.	BEFORE OU DIG www.byda.com.au	
S								COPYRIGHT - This drawing and the information provided shall remain the pr	roperty of DRB	
К Ч К	A	07.08.2024	SF		BR	ISSUED FOR DEVELOPMENT APPLICATION		Consulting Engineers Pty Ltd (DRB) and may not be used, copied or reproduced, for any purpose other than that for which it was supplied without the prior consent	in whole or part, t of DRB.	
	REV	DATE	DRN	СНК	APP	DRAWING STATUS		This drawing has been produced in colour and may be incomplete if printed/copie All dimensions to be verified on-site before commencing work.	d in black & white.	

## - ANGLE FIRST STAKE 1.2m STAR PICKET DRIVEN TOWARDS PREVIOUS BALE. ELEVATION 600mm INTO GROUND 20m MAX. (UNO ON SWMP/ESCP) - NYLON OR WIRE BINDING. STRAW BALES TIGHTLY 1.5m TO 2m ABUTTING TOGETHER. PLAN DISTURBED AREA BALES EMBEDDED 100mm INTO GROUND

5. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND

![](_page_15_Picture_3.jpeg)

1. PLACE STOCKPILES MORE THAN 2m (PREFERABLY 5m) FROM EXISTING VEGETATION, CONCENTRATED WATER

4. WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR

STOCKPILES (SD 4-1)

3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT.

STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2m DOWNSLOPE.

CONSTRUCTION NOTES

FLOW, ROADS AND HAZARD AREAS.

2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.

SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.

RTH BANK —		SANY SPECTL
	SEDIMENT FENCE	
W 1 2 (MAX)	2 (MAX)	

![](_page_15_Picture_5.jpeg)

2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.

5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.

3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER

NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES.

EARTH BANK - LOW FLOW (SD 5-5)

4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED.

6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

CONSTRUCTION NOTES

FLOW.

BUILD WITH GRADIENTS BETWEEN 1 AND 5 PERCENT.

![](_page_15_Picture_6.jpeg)

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PJE MANAGEMENT TITLE SOIL AND WATER MANAGEMENT DETAILS

CONSTRUCTION SITE

CONSTRUCTION NOTES

DGB 20 ROADBASE OR 30mm AGGREGATE

CBR BURST STRENGTH (AS3706.4-90) OF 2500 N

2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.

TO DIVERT WATER TO THE SEDIMENT FENCE.

GEOTEXTILE FABRIC DESIGNED TO PREVENT INTERMIXING OF

SUBGRADE AND BASE MATERIALS AND TO MAINTAIN GOOD

PROPERTIES OF THE SUB-BASE LAYERS. GEOFABRIC MAY BE

A WOVEN OR NEEDLE-PUNCHED PRODUCT WITH A MINIMUM

STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.

PROJECT

RUNOFF DIRECTED TO SEDIMENT TRAP/FENCE

- SPILLWAY OR LOWERED CROSS-SECTION TO MINIMISE LIKELIHOOD OF OVERBANK FLOWS

- BATTER 1(V):3(H) OR

OTHERWISE

SUPPORTED

2. STRIP ANY TOPSOIL AND PLACE A NEEDLE-PUNCHED TEXTILE OVER THE BASE OF THE CROSSING.

3. PLACE CLEAN, RIGID, NON POLLUTING AGGREGATE OR GRAVEL IN THE 100mm TO 150mm SIZE CLASS

4. PROVIDE A 3m WIDE CARRIAGEWAY WITH SUFFICIENT LENGTH OF CULVERT PIPE TO ALLOW LESS THAN

5. INSTALL A LOWER SECTION TO ACT AS AN EMERGENCY SPILLWAY IN GREATER THAN DESIGN STORM

TEMPORARY WATERWAY CROSSING (SD 5-1)

6. ENSURE THAT CULVERT OUTLETS EXTEND BEYOND THE TOE OF FILL EMBANKMENTS.

ROADWA,

ROADWAY

NEEDLE-PUNCHED

CONSTRUCTION NOTES

1. PROHIBIT ALL TRAFFIC UNTIL THE ACCESS WAY IS CONSTRUCTED.

- 1.5m STAR PICKETS AT MAX 2.5m CENTRES - SELF-SUPPORTING GEOTEXTILE

- ON SOIL, 150mmx100mm TRENCH WITH COMPACTED

BACKFILL AND ON ROCK, SET

STAR PICKETS AT MAX 2.5m CENTRES

CLIENT

INTO SURFACE CONCRETE.

DIRECTION OF FLOW

SECTION DETAIL

OVER THE FABRIC TO A MINIMUM DEPTH OF 200mm.

A 3(H): 1 (V) SLOPE ON SIDE BATTERS.

GEOTEXTILE -

EVENTS.

- ALL BATTER GRADES

- 1.5m STAR PICKETS AT

DIRECTION OF FLOW

MAX 2.5m CENTRES

DISTURBED

AREA

UNDISTURBED AREA

CONSTRUCTION NOTES

ENTRENCHED.

2(H):1(V) MAX.

# SEDIMENT FENCE (SD 6-8)

20m MAX

CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE,

2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE

3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE

4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF

THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS

BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION.

THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO

FLOW

PLAN

6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.

OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.

- NOT SATISFACTORY.

- 5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.

![](_page_15_Figure_42.jpeg)

### CONSTRUCTION NOTES

1. CHECK DAMS CAN BE BUILT WITH VARIOUS MATERIALS, INCLUDING ROCKS, LOGS, SANDBAGS AND STRAW BALES. THE MAINTENANCE PROGRAM SHOULD ENSURE THEIR INTEGRITY IS RETAINED, ESPECIALLY WHERE CONSTRUCTED WITH STRAW BALES. IN THE CASE OF BALES, THIS MIGHT REQUIRE THEIR REPLACEMENT EACH TWO TO FOUR MONTHS.

2. TRENCH THE CHECK DAM 200mm INTO THE GROUND ACROSS ITS WHOLE WIDTH. WHERE ROCK IS USED, FILL THE TRENCHES TO AT LEAST 100mm ABOVE THE GROUND SURFACE TO REDUCE THE RISK OF UNDERCUTTING. 3. NORMALLY, THEIR MAXIMUM HEIGHT SHOULD NOT EXCEED 600mm ABOVE THE GULLY FLOOR. THE CENTRE SHOULD ACT AS A SPILLWAY, BEING AT LEAST 150mm LOWER THAN THE OUTER EDGES. 4. SPACE THE DAMS SO THE TOE OF THE UPSTREAM DAM IS LEVEL WITH THE SPILLWAY OF THE NEXT DOWNSTREAM DAM.

# ROCK CHECK DAM (SD 5-4)

![](_page_15_Figure_47.jpeg)

3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE. 4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METRES WIDE. 5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS

# STABILISED SITE ACCESS (SD 6-14)

RURAL SUBDIVISION	DRAWING STATUS NOT FOR CON	STRUCTION	SHEET SIZE
	SCALE		DRAWN
256 LENNOXTON ROAD, VACY. NSW. 2421.	PROJECT REF №. 200380	DRAWING No.	

# EROSION AND SEDIMENT CONTROL NO

### GENERAL

- ESCP REFERS TO EROSION AND SEDIMENT CONTROL PLAN AND SWMP REFERS TO SOIL AND WATER MANAGEMENT PLAN.
- ESC REFERS TO EROSION AND SEDIMENT CONTROL.
- SEDIMENT, INCLUDES, BUT IS NOT LIMITED TO, CLAY, SILT, SAND, GRAVEL, SOIL, MUD, CEMENT, 3. AND CERAMIC WASTE.
- Δ ANY REFERENCE TO THE BLUE BOOK REFERS TO MANAGING URBAN STORMWATER -SOILS AND CONSTRUCTION. LANDCOM, 2004.
- ANY REFERENCE TO THE IECA WHITE BOOKS (2008) REFERS TO IECA 2008. BEST PRACTICE EROSION AND SEDIMENT CONTROL BOOKS 1-6.INTERNATIONAL EROSION CONTROL ASSOCIATION (AUSTRALASIA).
- ANY MATERIAL DEPOSITED IN ANY CONSERVATION AREA FROM WORKS ASSOCIATED WITH THE DEVELOPMENTS HALL BE REMOVED IMMEDIATELY BY MEASURES INVOLVING MINIMAL GROUND AND/OR VEGETATION DISTURBANCE AND NO MACHINERY ,OR FOLLOWING DIRECTIONS BY COUNCIL L AND/OR WITHIN A TIMEFRAME ADVISED BY COUNCIL.

### THE ESCP

- THE ESCP AND ITS ASSOCIATED ESC MEASURES SHALL BE CONSTANTLY MONITORED , REVIEWED ,AND MODIFIED AS REQUIRED TO CORRECT DEFICIENCIES. COUNCIL HAS THE RIGHT TO DIRECT CHANGES IF, IN ITS OPINION, THE MEASURES THAT ARE PROPOSED OR HAVE BEEN INSTALLED ARE INADEQUATE TO PREVENT POLLUTION.
- PRIOR TO ANY ACTIVITIES ONSITE. THE RESPONSIBLE PERSON(S) IS TO BE NOMINATED. THE RESPONSIBLE PERSON(S) SHALL BE RESPONSIBLE FOR THE ESC MEASURES. THE NAME. ADDRESS AND 24 HOUR CONTACT DETAILS OF THE PERSON(S) SHALL BE PROVIDED TO COUNCIL IN WRITING . COUNCIL SHALL BE ADVISED WITHIN 48 HOURS OF ANY CHANGES TO THE RESPONSIBLE PERSON(S), OR THEIR CONTACT DETAILS, IN WRITING.
- AT LEAST 14 DAYS BEFORE THE NATURAL SURFACE IS DISTURBED IN ANY NEW STAGE, THE CONTRACTOR SHALL SUBMIT TO THE CERTIFIER ,A PLAN SHOWING ESC MEASURES FOR THAT STAGE. THE DEGREE OF DESIGN DETAIL SHALL BE BASED ON THE DISTURBED AREA.
- AT ANY TIME, THE ESC MEASURES ONSITE SHALL BE APPROPRIATE FOR THE AREA OF DISTURBANCE AND ITS CHARACTERISTICS INCLUDING SOILS (IN ACCORDANCE WITH THOSE REQUIRED FOR THE SITE AS PER DCP).
- THE IMPLEMENTATION OF THE ESCP SHALL BE SUPERVISED BY PERSONNEL WITH APPROPRIATE QUALIFICATIONS AND/OR EXPERIENCE IN ESC ON CONSTRUCTION SITES.
- 12. THE APPROVED ESCP SHALL BE AVAILABLE ON-SITE FOR INSPECTION BY COUNCIL OFFICERS WHILE WORK ACTIVITIES ARE OCCURRING.
- 13. THE APPROVED ESCP SHALL BE UP TO DATE AND SHOW A TIMELINE OF INSTALLATION, MAINTENANCE AND REMOVAL OF ESC MEASURES.
- ALL ESC MEASURES SHALL BE APPROPRIATE FOR THE SEDIMENT TYPE(S)OF THE SOILS ONSITE, IN ACCORDANCE WITH THE BLUE BOOK, IECA WHITE BOOKS OR OTHER CURRENT RECOGNISED INDUSTRY STANDARD FOR ESC FOR AUSTRALIAN CONDITIONS
- ADEQUATE SITE DATA, INCLUDING SOIL DATA FROM A NATA APPROVED LABORATORY, SHALL BE 15 OBTAINED TO ALLOW THE PREPARATION OF AN APPROPRIATE ESCP. AND ALLOW THE SELECTION. DESIGN AND SPECIFICATION OF REQUIRED ESC MEASURES.
- ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE APPROVED ESCP (AS AMENDED FROM TIME TO TIME) UNLESS CIRCUMSTANCES ARISE WHERE:
- COMPLIANCE WITH THE ESCP WOULD INCREASE THE POTENTIAL FOR ENVIRONMENTAL a) HARM: OR
- CIRCUMSTANCES CHANGE DURING CONSTRUCTION AND THOSE CIRCUMSTANCES COULD NOT HAVE BEEN FORESEEN; OR
- COUNCIL DETERMINE S THAT UNACCEPTABLE OFF-SITE SEDIMENTATION IS OCCURRING AS A RESULT OF A LAND-DISTURBING ACTIVITY . IN EITHER CASE, THE PERSON(S )RESPONSIBLE MAY BE REQUIRED TO TAKE ADDITIONAL .OR ALTERNATIVE PROTECTIVE ACTION, AND/OR UNDERTAKE REASONABLE RESTORATION WORKS WITHIN
- THE TIMEFRAME SPECIFIED BY THE COUNCIL. d)
- ADDITIONAL ESC MEASURES SHALL BE IMPLEMENTED , AND A REVISED ESCP SUBMITTED FOR APPROVAL TO THE CERTIFIER (WITHIN FIVE BUSINESS DAYS OF ANY SUCH AMENDMENTS) IN THE EVENT THAT:
  - THERE IS A HIGH PROBABILITY THAT SERIOUS OR MATERIAL ENVIRONMENTAL HARM MAY a) OCCUR AS A RESULT OF SEDIMENT LEAVING THE SITE; OR
  - THE IMPLEMENTED WORKS FAIL TO ACHIEVE COUNCIL'S WATER QUALITY OBJECTIVES SPECIFIED IN THESE CONDITIONS; OR
  - SITE CONDITIONS SIGNIFICANTLY CHANGE; OR c)
  - SITE INSPECTIONS INDICATE THAT THE IMPLEMENTED WORKS ARE FAILING TO ACHIEVE THE "OBJECTIVE" OF THE ESCP.
- A COPY OF ANY AMENDED ESCP SHALL BE FORWARDED TO AN APPROPRIATE COUNCIL OFFICER. WITHIN FIVE BUSINESS DAYS OF ANY SUCH AMENDMENTS. SITE ESTABLISHMENT INCLUDING CLEARING AND MULCHING

### SITE ESTABLISHMENT INCLUDING CLEARING AND MULCHING

- 19. NO LAND CLEARING SHALL BE UNDERTAKEN UNLESS PRECEDED BY THE INSTALLATION ADEQUATE DRAINAGE AND SEDIMENT CONTROL MEASURES, UNLESS SUCH CLEARING REQUIRED FOR THE PURPOSE OF INSTALLING SUCH MEASURES, IN WHICH CASE, ONLY MINIMUM CLEARING REQUIRED TO INSTALL SUCH MEASURES SHALL OCCUR.
- 20. BULK TREE CLEARING AND GRUBBING OF THE SITE SHALL BE IMMEDIATELY FOLLOWED SPECIFIED TEMPORARY EROSION CONTROL MEASURES (E.G. TEMPORARY GRASSING ( MULCHING) PRIOR TO COMMENCEMENT OF EACH STAGE OF CONSTRUCTION WORKS.
- 21. TREES AND VEGETATION CLEARED FROM THE SITE SHALL BE MULCHED ONSITE WITHIN CI FARING
- APPROPRIATE MEASURES SHALL BE UNDERTAKEN TO CONTROL ANY DUST ORIGINATIN 22. THE MULCHING OF VEGETATION ONSITE.
- 23. ALL OFFICE FACILITIES AND OPERATIONAL ACTIVITIES SHALL BE LOCATED SUCH THAT EFFLUENT, INCLUDING WASH-DOWN WATER, CAN BE TOTALLY CONTAINED AND TREAT THE SITE.
- 24. ALL REASONABLE AND PRACTICABLE MEASURES SHALL BE TAKEN TO ENSURE STORM RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT SYSTEMS, DRAINS TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
- 25. SITE EXIT POINTS SHALL BE APPROPRIATELY MANAGED TO MINIMISE THE RISK OF SEDI BEING TRACKED ONTO SEALED, PUBLIC ROADWAYS.
- 26. STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT POINTS SH TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
- 27. THE APPLICANT SHALL ENSURE AN ADEQUATE SUPPLY OF ESC, AND APPROPRIATE POL CLEAN-UP MATERIALS ARE AVAILABLE ON-SITE AT ALL TIMES.
- 28. ALL TEMPORARY EARTH BANKS, FLOW DIVERSION SYSTEMS, AND SEDIMENT BASIN EMBANKMENTS SHALL BE MACHINE-COMPACTED, SEEDED AND MULCHED WITHIN TEN OF FORMATION FOR THE PURPOSE OF ESTABLISHING A VEGETATIVE COVER, OR LINED APPROPRIATELY.
- 29. SEDIMENT DEPOSITED OFF SITE AS A RESULT OF ON-SITE ACTIVITIES SHALL BE COLLED THE AREA CLEANED/REHABILITATE ADS SOON AS REASONABLE AND PRACTICABLE.
- 30. CONCRETE WASTE AND CHEMICAL PRODUCTS , INCLUDING PETROLEUM AND OIL-BASE PRODUCTS ,SHALL BE PREVENTED FROM ENTERING ANY INTERNAL OR EXTERNAL WAT OR ANY EXTERNAL DRAINAGE SYSTEM, EXCLUDING THOSE ON-SITE WATER BODIES SPECIFICALLY DESIGNED TO CONTAIN AND/OR TREAT SUCH MATERIAL. APPROPRIATE SHALL BE INSTALLED TO TRAP THESE MATERIALS ONSITE.
- 31. BRICK, TILE OR MASONRY CUTTING SHALL BE CARRIED OUT ON A PERVIOUS SURFACE OPEN SOIL) AND IN SUCH A MANNER THAT ANY RESULTING SEDIMENT-LADDER RUNOF PREVENTED FROM DISCHARGING INTO A GUTTER , DRAIN OR APPROPRIATE MEASURES INSTALLED TO TRAP THESE MATERIALS ONSITE.
- 32. NEWLY SEALED HARD-STAND AREAS (E.G. ROADS, DRIVEWAYS AND CAR PARKS) SHALI THOROUGHLY AS SOON AS PRACTICABLE AFTER SEALING/SURFACING TO MINIMISE TH COMPONENTS OF THE SURFACING COMPOUND ENTERING STORMWATER DRAINS.
- 33. STOCKPILES OF ERODIBLE MATERIAL SHALL BE PROVIDED WITH AN APPROPRIATE PRO COVER (SYNTHETIC OR ORGANIC) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED F THAN 10 DAYS.
- STOCKPILES , TEMPORARY OR PERMANENT , SHALL NOT BE LOCATED IN AREAS IDENTIF 34 NO-GO ZONES (INCLUDING ,BUT NOT LIMITED TO, RESTRICTED ACCESS AREAS, BUFFEF OR AREAS OF NON-DISTURBANCE) ON THE ESCP.
- NO MORE THAN 150M OF A STORMWATER, SEWER LINE OR OTHER SERVICE TRENCH SH OPEN AT ANY ONE TIME.
- 36. SITE SPOIL SHALL BE LAWFULLY DISPOSED OF IN A MANNER THAT DOES NOT RESULT I SOIL EROSION OR ENVIRONMENTAL HARM.
- WHEREVER REASONABLE AND PRACTICABLE .STORMWATER RUNOFF ENTERING THE S 37 EXTERNAL AREAS, AND NON-SEDIMENT LADEN STORMWATER RUNOFF ENTERING A WO OR AREA OF SOIL DISTURBANCE .SHALL BE DIVERTED AROUND OR THROUGH THAT ARE MANNER THAT MINIMISES SOIL EROSION AND THE CONTAMINATION OF THAT WATER FO DISCHARGES UP TO THE SPECIFIED DESIGN STORM DISCHARGE.

IONS							This drawing is <u>not</u> approved for construction unless signed.	
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	SITE	E MANAGEMENT INCLUDING DUST	59
N OF IS 7 THE	38.	PRIORITY SHALL BE GIVEN TO THE PREVENTION ,OR AT LEAST THE MINIMISATION OF SOIL EROSION ,RATHER THAN THE TRAPPING OF DISPLACED SEDIMENT . SUCH A CLAUSE SHALL NOT REDUCE THE RESPONSIBILITY TO APPLY AND MAINTAIN ,AT ALL TIMES, ALL NECESSARY ESC MEASURES.	
) by Or	39.	MEASURES USED TO CONTROL WIND EROSION SHALL BE APPROPRIATE FOR THE LOCATION AND PREVENT SOIL EROSION AND EMISSIONS FROM SITE AT ALL TIMES, INCLUDING WORKING HOURS ,OUT OF HOURS ,WEEKENDS ,PUBLIC HOLIDAYS ,AND DURING ANY OTHER SHUTDOWN PERIODS.	
N 7 DAYS OF	40.	THE APPLICATION OF LIQUID OR CHEMICAL-BASED DUST SUPPRESSION MEASURES SHALL ENSURE THAT SEDIMENT-LADEN RUNOFF RESULTING FROM SUCH MEASURES DOES NOT CREATE A TRAFFIC OR ENVIRONMENTAL HAZARD	60
NG DUE TO ANY	41.	ALL CUT AND FILL EARTH BATTERS LESS THAN 3M IN ELEVATION SHALL BE TOPSOILED, AND GRASS SEEDED/HYDROMULCHED WITHIN 10 DAYS OF COMPLETION OF GRADING IN CONSULTATION WITH COUNCIL.	61
ED WITHIN	42.	ALL DISTURBED AREAS SHALL BE STABILISED IN ACCORDANCE WITH TIME LINES IN THE BLUE BOOK.	62
WATER	43.	ALL REASONABLE AND PRACTICABLE MEASURES SHALL BE TAKEN TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT FROM THE SITE.	63
IMENT	44.	SUITABLE ALL-WEATHER MAINTENANCE ACCESS SHALL BE PROVIDED TO ALL SEDIMENT CONTROL DEVICES.	
HALL DRAIN	45.	SEDIMENT CONTROL DEVICES ,OTHER THAN SEDIMENT BASINS ,SHALL BE DE-SILTED AND MADE FULLY OPERATIONAL AS SOON AS REASONABLE AND PRACTICABLE AFTER A SEDIMENT-PRODUCING EVENT , WHETHER NATURAL OR ARTIFICIAL , IF THE DEVICE'S SEDIMENT PETENTION CARACITY FALLS BELOW 75% OF ITS DESIGN RETENTION CARACITY	64
	46.	ALL EROSION AND SEDIMENT CONTROL MEASURES ,INCLUDING DRAINAGE CONTROL MEASURES ,SHALL BE MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THEIR OPERATIONAL	65
(10) DAYS )	47.	WASHING/FLUSHING OF SEALED ROADWAYS SHALL ONLY OCCUR WHERE SWEEPING HAS FAILED TO REMOVE SUFFICIENT SEDIMENT AND THERE IS A COMPELLING NEED TO REMOVE THE	66
CTED AND		AND PRACTICABLE SEDIMENT (E.G. FOR SAFETY REASONS). IN SUCH CIRCUMSTANCES A, L REASONABLE AND PRACTICABLE SEDIMENT CONTROL MEASURES SHALL BE USED TO PREVENT, OR AT LEAST MINIMISE ,THE RELEASE OF SEDIMENT INTO RECEIVING WATERS. ONLY THOSE MEASURES THAT WILL NOT CAUSE SAFETY AND PROPERTY FLOODING ISSUES SHALL BE EMPLOYED . SEDIMENT REMOVED FROM ROADWAYS SHALL BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT	67
MEASURES	40	CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.	60
GRASS OR	48.	SEDIMENT REMOVED FROM SEDIMENT TRAPS AND PLACES OF SEDIMENT DEPOSITION SHALL BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.	
SHALL BE	SED	IMENT BASINS (WHERE REQUIRED) INSTALLATION , MAINTENANCE	
	AND	) REMOVAL, INCLUDING SEDIMENT TRAPS	
IE RISK OF	49.	AS-CONSTRUCTED PLANS SHALL BE PREPARED FOR ALL CONSTRUCTED SEDIMENT BASINS AND ASSOCIATED EMERGENCY SPILLWAYS . SUCH PLANS SHALL VERIFY THE BASIN'S DIMENSIONS ,LEVELS AND VOLUMES COMPLY WITH THE APPROVED DESIGN DRAWINGS. THESE PLANS MAY BE REQUESTED BY THE CERTIFIER OR COUNCIL.	68
OR MORE	50.	SEDIMENT BASINS SHALL BE CONSTRUCTED AND FULLY OPERATIONAL PRIOR TO ANY OTHER SOIL	69
FIED AS R ZONES,	51.	INSTALL AN INTERNAL GATED VALVE, OR SIMILAR ,IN ANY OUTLET PIPE ONCE PIPES INSTALLED ,OR INSTALL A SACRIFICIAL PIPE FROM BASIN THROUGH WALL TO EXTERNAL OUTLET POINT. THE	70
HALL TO BE		VALVE SHALL BE CONNECTED TO A RISER MADE FROM SLOTTED PIPE IN THE BASIN. THE VALVE MAY BE OPENED ONCE CAPTURED WATER MEETS WATER QUALITY REQUIREMENTS .THE FINAL SETUP FOR TEMPORARY INTERNAL OUTLET STRUCTURES TO BE CONFIRMED PRIOR TO CONSTRUCTION WITH COUNCIL. THIS SETUP WILL ENABLE DISCHARGE OF TREATED WATER FROM	71
IN ONGOING		SITE WITHOUT NEED FOR PUMPING.	
SITE FROM ORK AREA	52.	A SEDIMENT STORAGE LEVEL MARKER POST SHALL BE WITH A CROSS MEMBER SET JUST BELOW THE TOP OF THE SEDIMENT STORAGE ZONE (AS SPECIFIED ON THE APPROVED ESCP). AT LEAST A 75MM WIDE POST SHALL BE FIRMLY SET INTO THE BASIN FLOOR.	72
ea in a Or all	53.	THE SITE MANAGER SHALL OBTAIN THE RELEVANT APPROVALS FROM THE RELEVANT ORGANISATIONS TO DISCHARGE TREATED WATER FROM ANY EXISTING BASINS. ORGANISATIONS MAY INCLUDE , BUT NOT BE LIMITED TO, HUNTER WATER , AND COUNCIL.	73
	54.	WHERE MORE THAN ONE STAGE IS TO BE DEVELOPED AT ONE TIME, OR BEFORE THE PRECEDING STAGE IS COMPLETE ,THE SEDIMENT BASIN(S )FOR THESE STAGES SHALL HAVE SUFFICIENT CAPACITY TO CATER FOR ALL AREA DIRECTED TO THE BASIN(S).	74
	55.	PRIOR TO ANY FORECAST WEATHER EVENT LIKELY TO RESULT IN RUNOFF, ANY BASINS/TRAPS SHALL BE DE-WATERED TO PROVIDE SUFFICIENT CAPACITY TO CAPTURE SEDIMENT LADEN WATER FROM THE SITE.	
	56		

- SUFFICIENT QUANTITIES OF CHEMICALS/AGENTS TO TREAT CAPTURED WATER SHALL BE PLACEL SUCH THAT WATER ENTERING THE BASIN MIXES WITH THE CHEMICAL/AGENTS AND IS CARRIED INTO THE BASIN TO SPEED UP CLARIFICATION.
- 57 ANY BASIN SHALL BE DE-WATERED WITHIN THE X-DAY RAINFALL DEPTH USED TO CALCULATE THE CAPACITY OF THE BASIN, AFTER A RAINFALL EVENT.
- SUFFICIENT QUANTITIES OF CHEMICALS/AGENTS TO TREAT TURBID WATER SHALL BE SECURELY 58. STORED ON-SITE TO PROVIDE FOR AT LEAST THREE COMPLETE TREATMENTS OF ALL BASINS REQUIRING CHEMICALLY TREATMENT ONSITE.

- PRIOR TO THE CONTROLLED DISCHARGE (E.G. DE-WATERING ACTIVITIES )FROM SIT EXCAVATION SAND/OR SEDIMENT BASINS, THE FOLLOWING WATER QUALITY OBJEC BE ACHIEVED:
  - TOTAL SUSPENDED SOLIDS (TSS) TO A MAXIMUM 50 MILLIGRAMS/L;
- WATER PH BETWEEN 6.5 AND 8.5, UNLESS OTHERWISE REQUIRED BY THE
- TURBIDITY (MEASURED IN NTUS) TO A MAXIMUM OF 60 NTU); AND
- EC LEVELS NO GREATER THAN BACKGROUND LEVELS.
- THE DEVELOPMENT AT APPROVAL MAY REQUIRE TESTING OF ADDITIONAL WATER OF ELEMENTS PRIOR TO DISCHARGE .E.G. INCLUDING BUT NOT LIMITED TO METALS, OF SUBSTANCES, CHEMICALS OR BACTERIOLOGICAL INDICATORS.
- A SAMPLE OF THE RELEASED TREATED WATER SHALL BE KEPT ONSITE IN A CLEAR WITH THE SAMPLE DATE RECORDED ON IT
- WATER QUALITY SAMPLES SHALL BE TAKEN AT A DEPTH NO LESS THAN 200MM BEL WATER SURFACE OF THE BASIN.
- NO ALUMINUM BASED PRODUCTS MAY BE USED TREAT CAPTURED WATER ONSITE PRIOR WRITTEN PERMISSION FROM AN APPROPRIATE COUNCIL OFFICER. THE APPL HAVE A DEMONSTRATED ABILITY TO USE SUCH PRODUCTS CORRECTLY AND WITHC ENVIRONMENTAL HARM PRIOR TO ANY APPROVAL.
- THE CHEMICAL/AGENT USED IN TYPE D AND TYPE F BASINS TO TREAT CAPTURED W CAPTURED IN THE BASIN SHALL BE APPLIED IN CONCENTRATION SUFFICIENT TO AC COUNCIL'S WATER QUALITY OBJECTIVES WITHIN THE X-DAY RAINFALL DEPTH USED CALCULATE THE CAPACITY OF THE BASIN, AFTER A RAINFALL EVENT.
- ALL MANUFACTURERS INSTRUCTION SHALL BE FOLLOWED FOR ANY CHEMICALS/AG ONSITE, EXCEPT WHERE APPROVED BY THE RESPONSIBLE PERSON OR AN APPROP COUNCIL OFFICER.
- THE APPLICANT SHALL ENSURE THAT ON EACH OCCASION A TYPE F OR TYPE D BAS DE-WATERED PRIOR TO BEING SURCHARGED BY A FOLLOWING RAINFALL EVENT .A PRESENTED TO AN APPROPRIATE COUNCIL OFFICER WITHIN 5 DAYS
- IDENTIFYING THE CIRCUMSTANCE SAND PROPOSED AMENDMENTS, IF ANY, TO THE OPERATING PROCEDURES.
- SETTLED SEDIMENT SHALL BE REMOVED AS SOON AS REASONABLE AND PRACTICA SEDIMENT BASIN IF:
  - IT IS ANTICIPATED THAT THE NEXT STORM EVENT IS LIKELY TO CAUSE SED SETTLE ABOVE THE BASIN'S SEDIMENT STORAGE ZONE; OR
  - THE ELEVATION OF SETTLED SEDIMENT IS ABOVE THE TOP OF THE BASIN'S STORAGE ZONE; OR
- THE ELEVATION OF SETTLED SEDIMENT IS ABOVE THE BASINS SEDIMENT N C)
- SCOUR PROTECTION MEASURES PLACED ON SEDIMENT BASIN EMERGENCY SPILLW APPROPRIATELY PROTECT THE SPILLWAY CHUTE AND ITS SIDE BATTERS FROM SCO SHALL EXTEND A MINIMUM OF 3M BEYOND THE DOWNSTREAM TOE OF THE BASIN'S
- SUITABLE ALL-WEATHER MAINTENANCE ACCESS SHALL BE PROVIDED TO ALL SEDIN DEVICES.
- MATERIALS, WHETHER LIQUID OR SOLID, REMOVED FROM ANY ESC MEASURE OR EX DURING MAINTENANCE OR DECOMMISSIONING S.HALL BE DISPOSED OF IN A MANNI NOT CAUSE ONGOING SOIL EROSION, WATER POLLUTION OR ENVIRONMENTAL HAR
- ALL SEDIMENT BASINS SHALL REMAIN FULLY OPERATIONAL LAT ALL TIMES UNTIL TH DESIGN CATCHMENTS ACHIEVES 70% GROUND COVER OR SURFACE STABILISATION TO COUNCIL.
- THE ESC MEASURES INSTALLED DURING THE DECOMMISSIONING AND REHABILITAT SEDIMENT BASIN SHALL COMPLY WITH SAME STANDARDS SPECIFIED FOR THE NOR CONSTRUCTION WORKS.
- A SEDIMENT BASIN SHALL NOT BE DECOMMISSIONED UNTIL ALL UP-SLOPE SITE STA MEASURES HAVE BEEN IMPLEMENTED AND ARE APPROPRIATELY WORKING TO CON EROSION AND SEDIMENT RUNOFF
- IMMEDIATELY PRIOR TO THE CONSTRUCTION N OF THE PERMANENT T STORMWATER TREATMENT DEVICE , APPROPRIATE FLOW BYPASS CONDITIONS SHALL BE ESTABLISHED TO PREVENT SEDIMENT-LADEN WATER ENTERING THE DEVICE.

![](_page_16_Picture_78.jpeg)

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TITLE

PJE MANAGEMENT

PROJECT RUF

# SOIL AND WATER MANAGEMENT NOTES

256

Т	Е	S

E INCLUDING	REV	EGETATION / STABILISATION
	75.	TEMPORARY STABILISATION MAY BE ATTAINED USING VEGETATION ,NON REWETTABLE SOIL POLYMERS, OR PNEUMATICALLY APPLIED EROSION CONTROLS.
COUNCIL;	76.	ALL CUT AND FILL EARTH BATTERS LESS THAN 3M IN ELEVATION SHALL BE TOPSOILED, AND GRASS SEEDED/HYDROMULCHED WITHIN 10 DAYS OF COMPLETION OF GRADING IN CONSULTATION WITH COUNCIL.
	77.	AT THE COMPLETION OF FORMATION IN ANY SECTION, ALL DISTURBED AREAS SHALL BE STABILISED IN ACCORDANCE WITH TIME LINES IN THE BLUE BOOK.
QUALITY RGANIC	78.	AN APPROVED SEED MIX SHALL BE USED UNLESS STATED ON THE ESCP/SWMP.
CONTAINER	79.	THE PH LEVEL OF TOPSOIL SHALL BE APPROPRIATE TO ENABLE ESTABLISHMENT AND GROWTH OF SPECIFIED VEGETATION PRIOR TO INITIATING THE ESTABLISHMENT OF VEGETATION.
	80.	NON REWETTABLE BINDER SHALL BE USED IN ALL HYDROMULCH/HYDROSEED/POLYMER MIXES ON SLOPES OR WORKS ADJACENT TO A WATER COURSE.
OW THE	81.	SOIL AMELIORANT'S SHALL ONLY BE ADDED TO THE SOIL IN ACCORDANCE WITH AN APPROVED LANDSCAPE PLAN, VEGETATION MANAGEMENT PLAN, AND/OR SOIL ANALYSIS.
WITHOUT THE LICANT SHALL DUT	82.	SURFACE SOIL DENSITY, COMPACTION AND SURFACE ROUGHNESS SHALL BE ADJUSTED PRIOR TO SEEDING/PLANTING IN ACCORDANCE WITH AN APPROVED LANDSCAPE PLAN, VEGETATION MANAGEMENT PLAN, AND/OR SOIL ANALYSIS.
VATER CHIEVE ) TO	83.	PROCEDURES FOR INITIATING A SITE SHUTDOWN , WHETHER PROGRAMMER OR UN-PROGRAMMED ,SHALL INCORPORATE REVEGETATION OF ALL SOIL DISTURBANCES UNLESS OTHERWISE APPROVED BY COUNCIL. THE STABILISATION WORKS SHALL NOT RELY UPON THE LONGEVITY OF NON-VEGETATED EROSION CONTROL BLANKETS ,OR TEMPORARY SOIL BINDERS.
GENTS USED PRIATE	SITI	E MONITORING AND MAINTENANCE
SIN WAS NOT REPORT IS	84.	THE APPLICANT SHALL ENSURE THAT APPROPRIATE PROCEDURES AND SUITABLY QUALIFIED PERSONNEL ARE ENGAGED TO PLAN AND CONDUCT SITE INSPECTIONS AND WATER QUALITY MONITORING THROUGHOUT THE CONSTRUCTION AND MAINTENANCE PHASE.
	85.	ALL ESC MEASURES SHALL BE INSPECTED AND ANY MAINTENANCE UNDERTAKEN IMMEDIATELY:
BASIN'S		a) AT LEAST DAILY (WHEN WORK IS OCCURRING ON-SITE); AND
BLE FROM ANY		b) AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON-SITE); AND
DIMENT TO		c) WITHIN 24HRS OF EXPECTED RAINFALL; AND
		d) WITHIN 18HRS OF A RAINFALL EVENT THAT CAUSES RUNOFF ON THE SITE.
S SEDIMENT	86.	WRITTEN RECORDS SHALL BE KEPT ONSITE OF ESC MONITORING AND MAINTENANCE ACTIVITIES CONDUCTED DURING THE CONSTRUCTION AND MAINTENANCE PERIODS, AND BE AVAILABLE TO COUNCIL OFFICERS ON REQUEST.
MARKER LINE.	07	
VAYS SHALL OUR, AND	87.	REMAIN ACCESSIBLE TO ALL RELEVANT REGULATORY AUTHORITIES
EMBANKMENT.	88.	ALL WATER QUALITY DATA, INCLUDING DATES OF RAINFALL, DATES OF TESTING, TESTING RESULTS AND DATES OF WATER RELEASE .SHALL BE KEPT IN AN ON-SITE REGISTER. THE
MENT CONTROL		REGISTER IS TO BE MAINTAINED UP TO DATE FOR THE DURATION OF THE APPROVED WORKS AND BE AVAILABLE ON-SITE FOR INSPECTION BY ALL RELEVANT REGULATORY AUTHORITIES ON REQUEST.
XCAVATION ER THAT DOES M.	89.	AT NOMINATED INSTREAM WATER MONITORING SITES, A MINIMUM OF 3 WATER SAMPLES SHALL BE TAKEN AND ANALYSED ,AND THE AVERAGE RESULT USED TO DETERMINE QUALITY
HE BASIN'S NACCEPTABLE	INS	TREAM WORKS
	90.	ALL INSTREAM WORKS (INCLUDING IN OR ADJACENT TO WATERCOURSES NATURAL OR MANMADE,
TION OF A MAL		FLOWING OR NOT) SHALL BE CARRIED OUT IN ACCORDANCE WITH THE IECA WHITE BOOKS
ABILISATION NTROL SOIL		

RAL SUBDIVISION	DRAWING STATUS NOT FOR CONSTRUCTION		SHEET SIZE
	SCALE		DRAWN SF
LENNOXTON ROAD,	PROJECT REF No.	DRAWING No.	REVISION
VACY. NSW. 2421.	200380	CIV-303	А

![](_page_17_Figure_0.jpeg)

	DRB	
	CONSULTING ENGINEERS	

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	PJE MANAGEMENT	RUF	2
TITLE	CATCHMENT PLAN PRE-DEVELOPED	256	 /

![](_page_18_Figure_0.jpeg)

	DRE
	CONSULTIN ENGINEER

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PJE MANAGEMENT	RUR
CATCHMENT PLAN POST-DEVELOPED	256 I V

# LEGEND

![](_page_18_Figure_5.jpeg)

PROPOSED BOUNDARY LINE EXISTING BOUNDARY LINE REDUNDANT BOUNDARY LINE EASEMENT LINE

POST-DEVELOPED CATCHMENT AREA. REFER TO PLAN.

	DRAWING STATUS NOT FOR CONSTRUCTION		SHEET SIZE A1
	SCALE 0 25 1 : 2500 (A1)	50 75 100 125m	DRAWN SF
LENNOXION ROAD,	PROJECT REF No.	DRAWING No.	REVISION
VACY. NSW. 2421.	200380	CIV-352	А