

16-001756-D056+

SLOPE ANALYSIS PLAN FINISHED SURFACE SHEET 3



AMEND.



NOTE: REFER 16-001756-D054+ FOR LEGEND



FIR	ST DESIGN DRAWN CHECK APPROVED DATE UE BC VVB M APPROVED DATE 23/03/2017	AMENDMENT DETAILS	WAE NO.	A3 PLOT SCALE (METRES) A1 PLOT 50 0 50 100 150	CLIENT	
A M E				1:7000		NORTH
D M			PROJECT No.			NEIGHBOURHOOD 2
NTS	A BC KC KC 10 29/09/2017	QPRC COMMENTS ADDRESSED			mana	DA SUBMISSION



# LEGEND

<b>←</b> ∆	BASIN AND DIRECTION OF FLOW
<b>←</b> 0	NODE AND DIRECTION OF FLOW
GC-1.3	SUBCATCHMENT
1.52ha	SUBCATCHMENT AREA (ha) (LOCAL)
6.6%	GRADIENT (%)
60%Imp	% IMPERVIOUS
	CATCHMENT
	SUB CATCHMENT

# NOTES:

1. CONTOURS AT 1.0m INTERVALS.



# DRAINAGE CATCHMENT PLAN

RAWING NUMBER 16-001756-D160+

			Estimated	lows (m3/s)	
Catchment ID	Catchment Area (Ha)	Q5	Q100	QOL	Qgap
	sou	TH-FAST CATC	HMENT		<b>_</b>
C08	400.0	15 32	30.95	15.6	23.3
09	338.5	12.26	24.99	12.7	18.9
C10	296.0	10.91	21.17	10.3	15.7
GC-1 1	2.6	0.10	0.25	0.2	0.2
GC-1.2	5.0	0.19	0.41	0.2	0.3
GC-1.3	3.3	0.13	0.31	0.2	0.2
GC-2.1	5.5	0.98	1.83	0.9	1.3
GC-2.2	3.2	0.57	1.09	0.5	0.8
GC-2.3	9.0	1.58	2.93	1.4	2.1
GC-3.1	4.2	0.21	0.57	0.4	0.5
GC-3.2	2.7	2.94	5.65	2.7	4.2
GC-3.3	2.3	0.14	0.35	0.2	0.3
GC-4.1	2.8	2.06	4.00	1.9	3.0
60-4.2	13.5	1 69	3.26	1.5	2.4
GC-4 3	24	0.31	0.63	0.3	0.5
605 1	15.6	2 12	3.92	1.8	29
005.1	<u> </u>		HMENT	1.0	2.5
WC-1 1	52	1 18	2 22	1.0	16
WC.1 2	1.8	n 19	0.47	0.3	0.4
WC-2.1	5.0	1.04	1.90	0.3	1.4
W/C-0	12.2	2.04	4 12	10	2.0
vv L-U	<u>1 12.2</u>			1.9	5.0
ND 1 1	<u>NO</u>		1 22	0.6	0.0
ND-1.1	1.0	0.67	1.22	0.6	0.9
ND-2.1	1.0	0.33	0.44	0.3	0.7
ND-2.2	1.3	0.23	0.44	0.2	0.3
ND-3.1	1.5	0.19	0.38	0.2	0.3
NB-4.1	0.9	0.03	0.07	0.0	0.1
NC 4.4	12	0.00	0.40		0.0
NG-1.1	1.2	0.22	0.40	0.2	0.3
NG-2.1	1.1	0.22	0.40	0.2	0.3
NG-3.1	1.6	0.28	0.51	0.2	0.4
					10.0
NM-0	2.9	8.30	14.98	6.7	10.8
NM-1.1	2.3	0.42	0.74	0.3	0.5
NM-1.1A	2.0	0.37	0.66	0.3	0.5
NM-2.1	3.0	1.10	2.00	0.9	1.5
NM-2.2	2.6	0.51	0.94	0.4	0.7
NM-3.1	3.5	0.70	1.05	0.4	0.7
NIVI-3.2	3.5	2.60	5.00	2.4	3.7
NM-3.2A	2.0	0.70	1.44	0.7	1.1
NM-3.3	2.7	0.40	0.90	0.5	0.7
NM-3.4	3.7	1.37	2.49	1.1	1.8
NM-4.1	5.7	1.10	2.00	0.9	1.5
NM-4.2	1.9	0.87	2.30	1.4	1.9
NM-4.3	7.5	0.41	1.45	1.0	1.2
NM-4.4	4.1	0.72	1.30	0.6	0.9
NM-4.5	5.5	0.38	0.99	0.6	0.8
NM-5.1	1.6	0.30	0.52	0.2	0.4
NM-6.1	2.3	0.26	0.53	0.3	0.4
NM-7.1	1.1	0.17	0.33	0.2	0.3
NM-7.2	3.7	1.27	2.29	1.0	1.7
NM-7.3	3.5	0.67	1.23	0.6	0.9
NM-7.4	3.0	0.43	0.80	0.4	0.6
NM-7.5	3.0	0.34	0.65	0.3	0.5
NM-7.6	15.1	0.78	2.10	1.3	1.7
NP-1.1	0.63	3.30	5.90	2.6	4.3
NP-1.2	1.9	1.90	3.40	1.5	2.5
NP-1.3	1.73	0.30	0.53	0.2	0.4
NP-1.4	5.18	0.94	1.65	0.7	1.2
NP-1.5	5.52	1.01	1.77	0.8	1.3

# NOTES:

- 1. STORMWATER FLOWS OBTAINED FROM XP-RAFTS RUNOFF ROUTING MODEL.
- 2. PIPES SHALL GENERALLY BE DESIGNED TO CONVEY THE 5 YEAR ARI STORM EVENT i.e. Q5 = QPIPE, EXCEPT AROUND THE NEIGHBOURHOOD CENTRE, WHERE THE PIPES SHALL BE DESIGNED TO CONVEY THE 20 YEAR ARI FLOWS.
- 3. FINAL PIPE SIZES SHALL BE SUBJECT TO DETAILED HYDRAULIC GRADE LINE ANALYSIS, MAKING APPROPRIATE ALLOWANCES FOR BLOCKAGE, OVERLAND FLOW CARRYING CAPACITY AND OTHER DESIGN CONSTRAINTS.
- 4. PIPE SIZES SHOWN IN THE DRAWINGS ARE INDICATIVE ONLY, BASED ON VERY APPROXIMATE ALLOWANCES FOR THE FACTORS NOTED IN 3 ABOVE
- 5. REFER DRAWING 16-001756-D163+ TO 16-001756-D167+ FOR PIPE NETWORK AND OVERLAND FLOW PATHS.
- 6. Q<sub>5</sub>
- = PEAK FLOW, ARI=5 = PEAK FLOW, ARI=100 = OVERLAND FLOW, Q<sub>100</sub>-Q<sub>5</sub> Q<sub>100</sub> Q<sub>OL</sub>

  - $Q_{GAP}$ = GAP FLOW, Q<sub>100</sub>-0.5Q<sub>5</sub>

### GENERAL NOTES:

1. STORMWATER TIES TO BE DISCHARGED TO KERB WHERE TOPOGRAPHY ALLOWS.

*	ADDITIONAL INLET AND PIPE CAPACITY WILL BE PROVIDED TO LIMIT $\mathbf{Q}_{\text{GAP}}$ FLOWS SUCH THAT THE
	CARRYING CAPACITY OF THE OVERLAND SYSTEM WILL NOT BE EXCEEDED.

FIR	ST DESIGN	N DRAWN CHECK APPROVED DATE	AMENDMENT DETAILS	WAE No.	ASPLOT SUALE (METRES) ATPLOT	CLIENT		PROJECT
ISS	JE BC	VVB AM APL 23/03/20	17 AMENDMENT DETAILS					COOC
A							-	6006
Ĕ							1000	NORTH
N								
ыH				PROJECT No.				NEIGHBOU
4							-	
έL							CONTRACTOR OF THE OWNER.	DA SUBMIS
ŝ	A BC	KC K 10 29/09/20	17 QPRC COMMENTS ADDRESSED					



DRAINAGE CATCHMENT DATA

AWING NUMBER 16-001756-D161+



FI	RST DESIGN D	DRAWN CHEC	CK APPROVE	D DATE	AMENDMENT DETAILS	WAE No.	A3 PLOT	SCALE (METRES)	A1 PLOT	CLIENT		PROJECT
A M E	SOE BC	VVB	<u>n</u>	23/03/2017			1:10000	50 0 100	1:5000		<u>_</u>	GOOGONG NORTH
D M						PROJECT No.						NEIGHBOURHOOD 2
N T S	A BC	KC K	. 1B	29/09/2017	QPRC COMMENTS ADDRESSED						sources.	DA SUBMISSION



# NOTE:

- 1. REFER DRAWING 16-001756-D161+ FOR CATCHMENT FLOW TABLE.
- FOR WSUD PLAN AND DETAILS REFER TO DRAWINGS 16-001756-240+ TO 16-001756-245+





	PROJECT No.	
QPRC COMMENTS ADDRESSED		
QPRC COMMENTS ADDRESSED		

A BC KC 290

NO STREET, ST

![](_page_4_Figure_3.jpeg)

# NOTE:

REFER DRAWING 16-001756-D161+ FOR CATCHMENT FLOW TABLE.
REFER DRAWING 16-001756-D163+ FOR LEGEND
PIPE/CULVERT SIZES AND CONFIGURATIONS SHOWN ARE

Z

- 3. PIPE/CULVERT SIZES AND CONFIGURATIONS SHOWN ARE INDICATIVE AND ARE INTENDED TO GIVE AN INDICATION OF THE REQUIRED CAPACITY OF THE UNDERGROUND STORMWATER SYSTEM, ALLOWING FOR APPROXIMATE OVERLAND FLOW CARRYING CAPACITY AND BLOCKAGE. FINAL PIPE/CULVERT SIZE WILL DEPEND ON MANY DESIGN CONSIDERATIONS, INCLUDING PIPE HYDRAULIC MODELLING, COVER AND GRADES.
- 4. CDS GPT LOCATIONS ARE INDICATIVE. UNITS ARE TO BE INCORPORATED AND LOCATED IN A SAFE LOCATION FOR MAINTENANCE. SIZING AND LOCATION OF UNITS WILL BE FINALISED IN DETAIL DESIGN.
- 5. EXISTING FARM DAMS ARE TO BE FILLED AS PER GRADING PLAN

![](_page_4_Picture_9.jpeg)

FOR CONTINUATION REFER 16-001756-D164+

![](_page_5_Figure_1.jpeg)