

LEGEND

- SITE BOUNDARY
- STAGE BOUNDARY
- PACKAGE BOUNDARY
- PROPOSED OVERLAND FLOW PATH
- GROSS POLLUTANT TRAP
- PROPOSED PERMANENT POND
- PROPOSED ON-SITE STORMWATER DETENTION BASIN
- PROPOSED WATER QUALITY TREATMENT DEVICE
- PROPOSED BIOSWALE



**MINTO URBAN RENEWAL
WATER CYCLE MANAGEMENT PLAN - OVERALL**

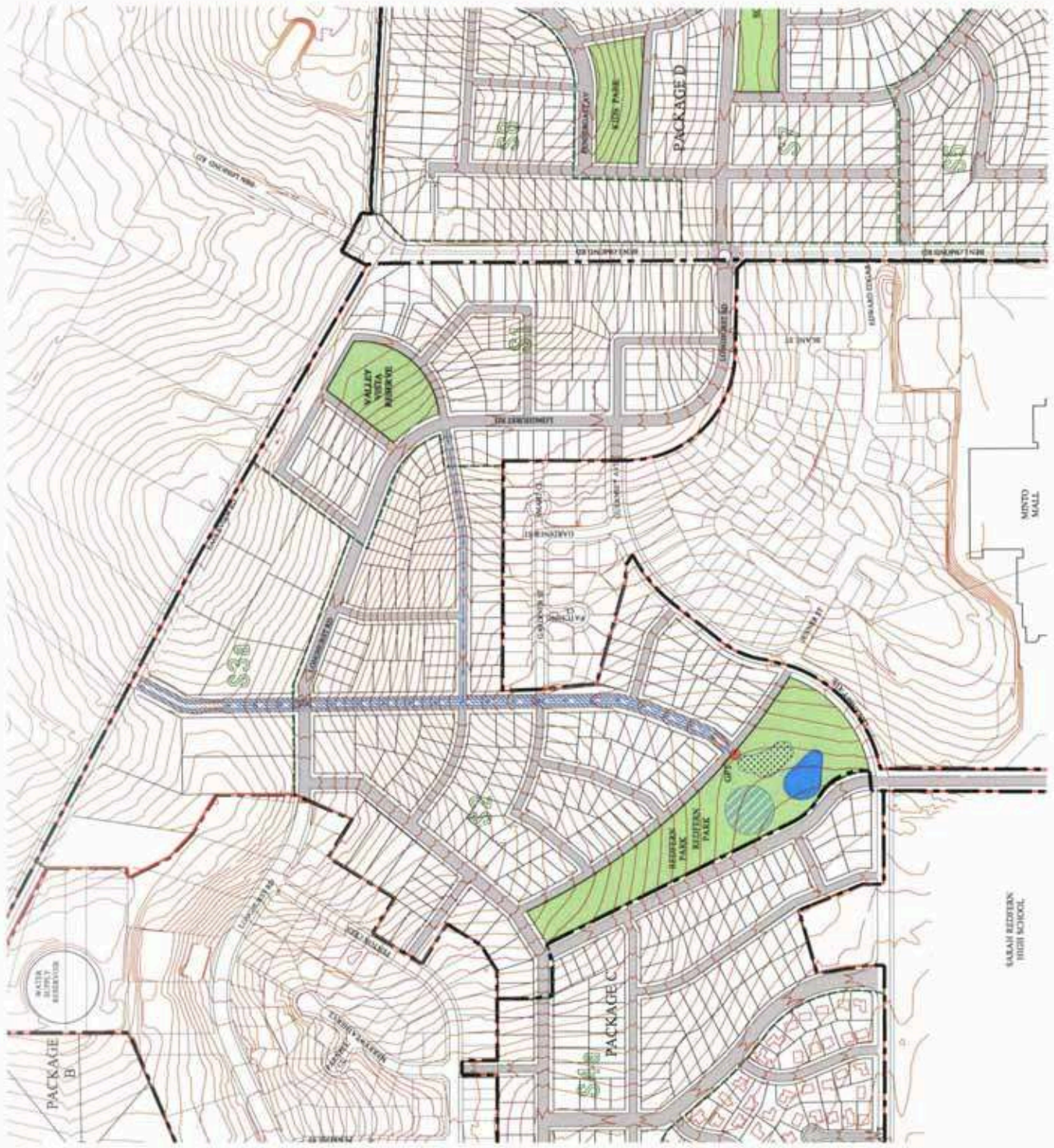


FIGURE 7

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Consulting Engineers Planners & Managers
100-111 St. John Street, Adelaide SA 5000
Tel: 8123 1234 Fax: 8123 4567 Email: info@hughes-trueman.com.au

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SA



LEGEND

- SITE BOUNDARY
- STAGE BOUNDARY
- PACKAGE BOUNDARY
- PROPOSED OVERLAND FLOW PATH
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- PROPOSED ON-SITE STORMWATER DETENTION BASIN
- PROPOSED WATER QUALITY TREATMENT DEVICE
- PROPOSED BIOSWALE

**MINTO URBAN RENEWAL
WATER CYCLE MANAGEMENT PLAN - PACKAGE A**



Hughes Trueman
 Consulting Engineers Planners & Managers
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 T 08 8467 2000 F 08 8467 1300 www.hughes-trueman.com.au

SARAH REDDEN
HIGH SCHOOL



FIGURE 8

LEGEND

- SITE BOUNDARY
- STAGE BOUNDARY
- PACKAGE BOUNDARY
- PROPOSED OVERLAND FLOW PATH
- GROSS POLLUTANT TRAP
- PROPOSED PERMANENT POND
- PROPOSED ON-SITE STORMWATER DETENTION BASIN
- PROPOSED WATER QUALITY TREATMENT DEVICE
- PROPOSED HIGSWALE



**MINTO URBAN RENEWAL
WATER CYCLE MANAGEMENT PLAN - PACKAGE C**



LEGEND

- 1. AMPHITHEATRE WITH STEPPED SEATING
- 2. PERMANENT POND
- 3. RAINGARDEN
- 4. GROSS POLLUTANT TRAP
- 5. PLAY EQUIPMENT
- 6. COMMUNITY HALL
- 7. BOARDWALK
- 8. POND FENCING/BOARDWALK HANDRAIL

REFER TO LANDSCAPE ARCHITECTS PLANS FOR PLANNING DETAILS

ROAD

INLET HEADWALL WITH LEVEL SPREADER

ROCK SCOUR PROTECTION TO INLET

RAINGARDEN (85sqm)
CONCRETE BLOCK BATTLE WALL

BOARDWALK

LOW FLOW OUTLET TO PERMANENT POND

LOW FLOW OUTLET TO AMPHITHEATRE

PERMANENT POND

AMPHITHEATRE

100 YR ARI SPILLWAY TO AMPHITHEATRE ON-SITE STORMWATER DETENTION BASIN

RAINGARDEN PLAN

SCALE: 1:400

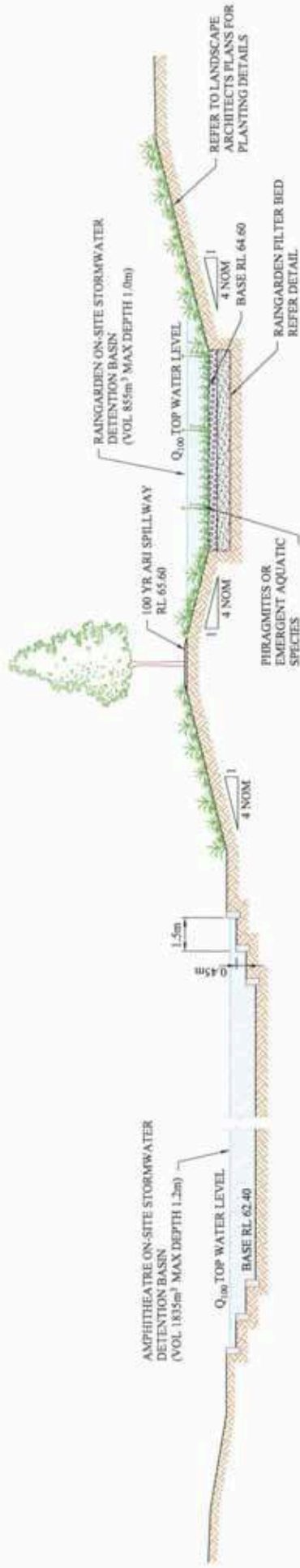
MINTO URBAN RENEWAL REDFERN PARK PLAN



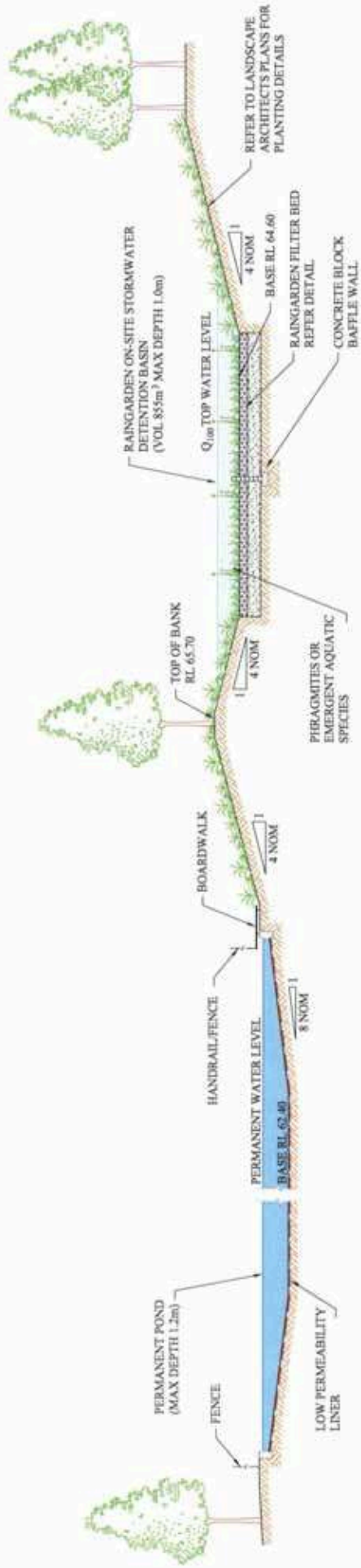
REDFERN PARK PLAN

SCALE: 1:2000

FIGURE 12



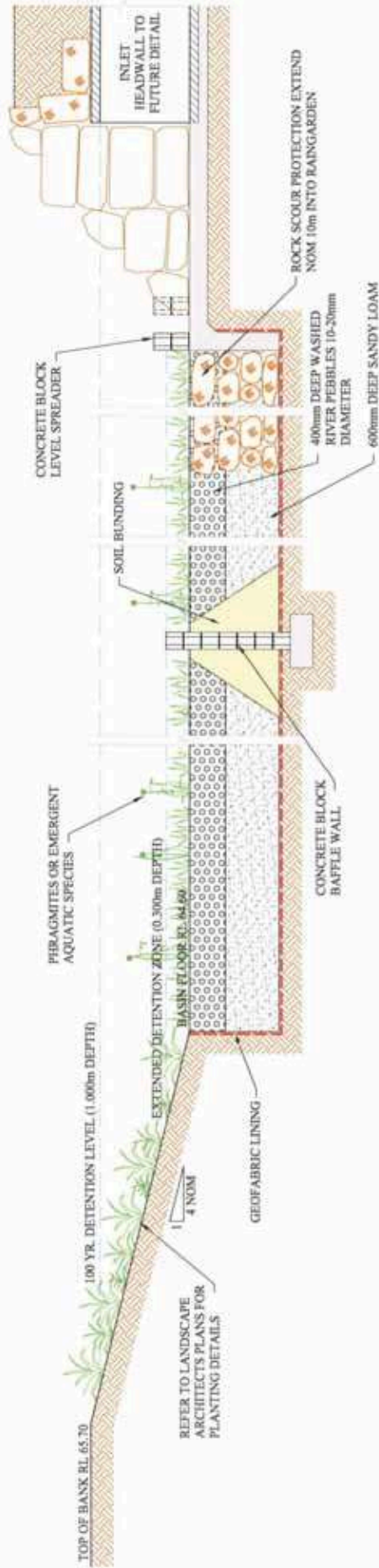
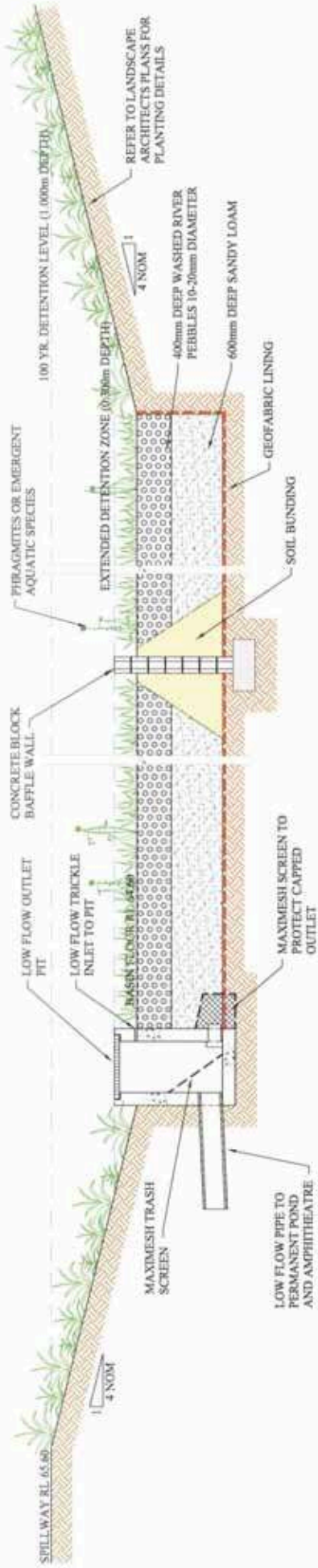
SECTION A-A



SECTION B-B



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M/S 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341, 343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 383, 385, 387, 389, 391, 393, 395, 397, 399, 401, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 429, 431, 433, 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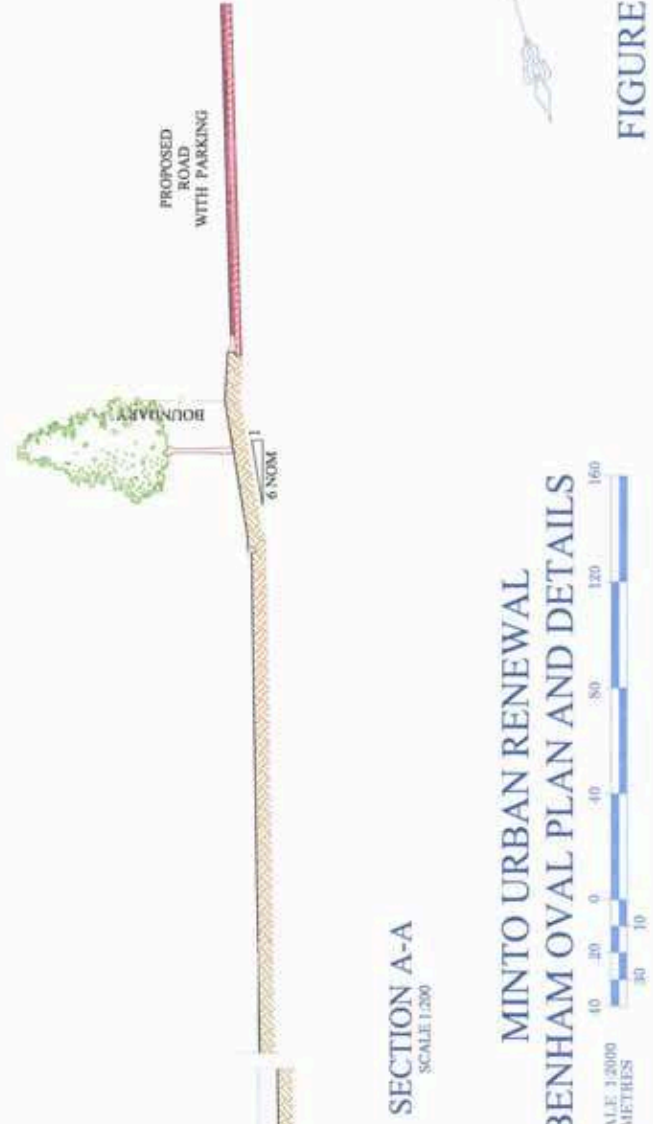
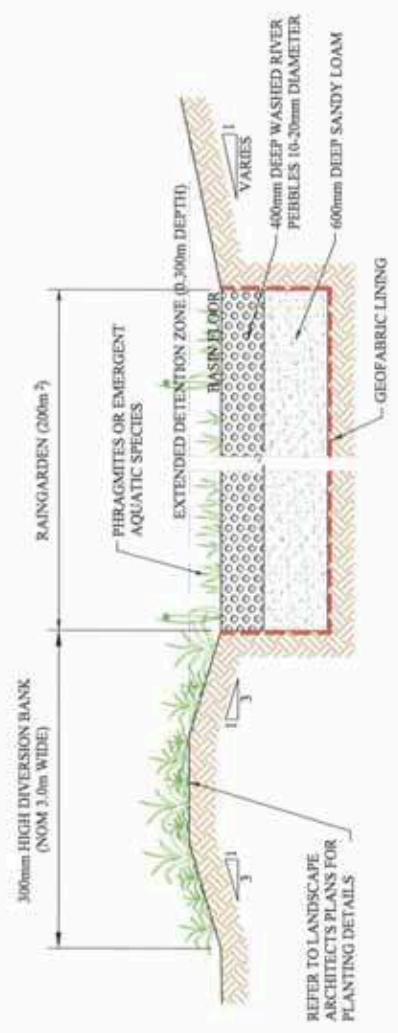
MINTO URBAN RENEWAL
REDFERN PARK RAINGARDEN DETAILS





LEGEND

- 1 AFL RUGBY LEAGUE OVAL
- 2 RAINGARDEN
- 3 GROSS POLLUTANT TRAP
- 4 AMENITIES AND KIOSK FACILITY
- 5 EXISTING CHILD CARE CENTRE
- 6 45° ANGLED PARKING TO STREET
- 7 RETAINING WALL TO CHILD CARE CENTRE
- 8 STEPPED BATTER FOR SEATING
- 9 DIVERSION BANK



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FIGURE 15



LEGEND

1. AMPHITHEATRE WITH STEPPED SEATING
2. RAINGARDEN
3. GROSS POLLUTANT TRAP
4. BASKETBALL COURT
5. BASIN OVERFLOW SPILLWAY

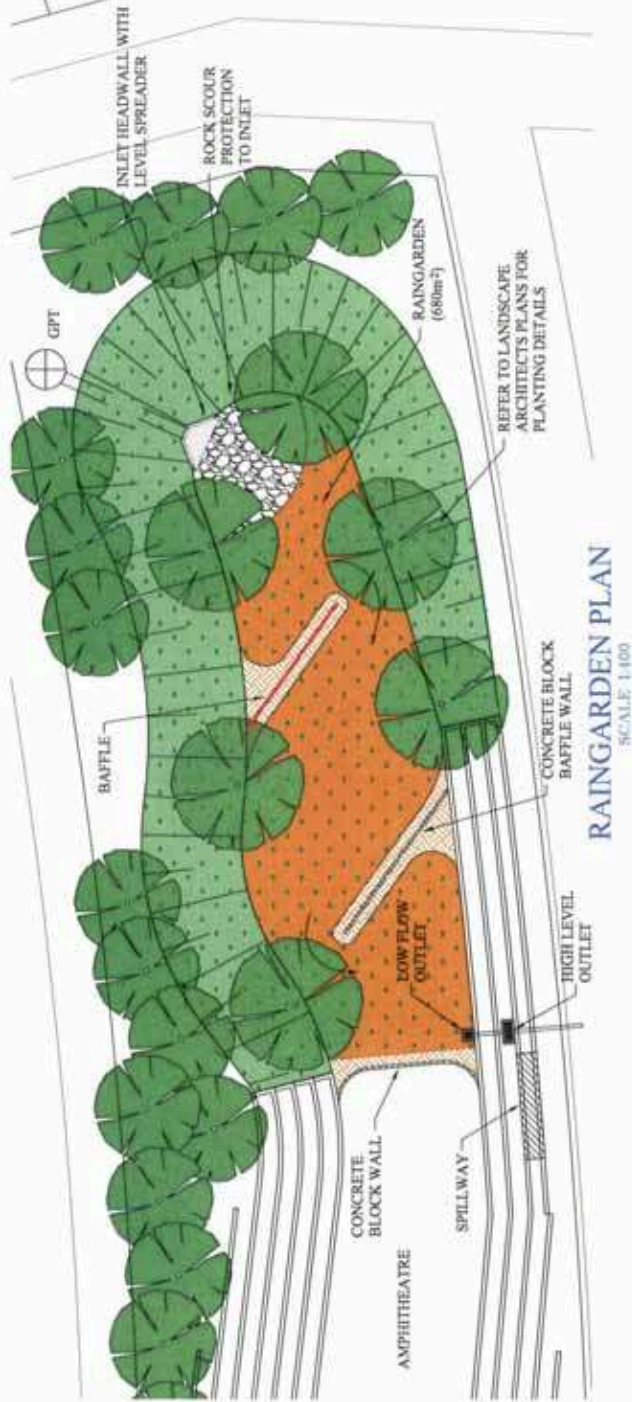
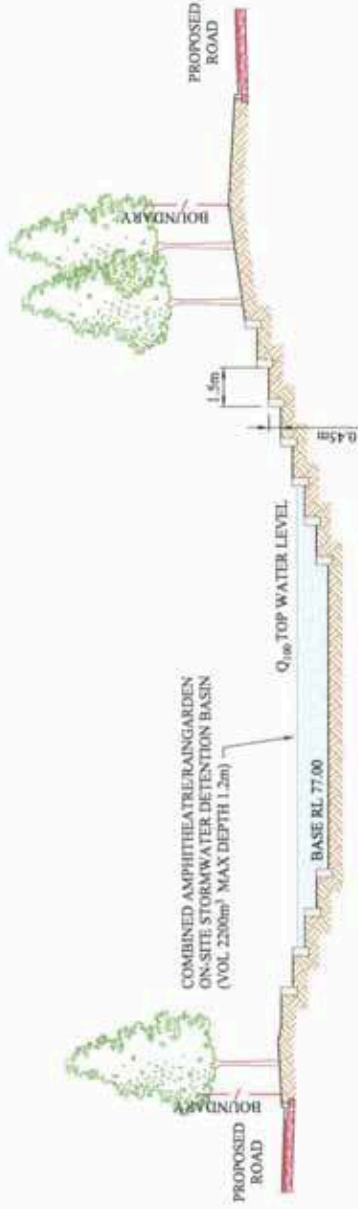
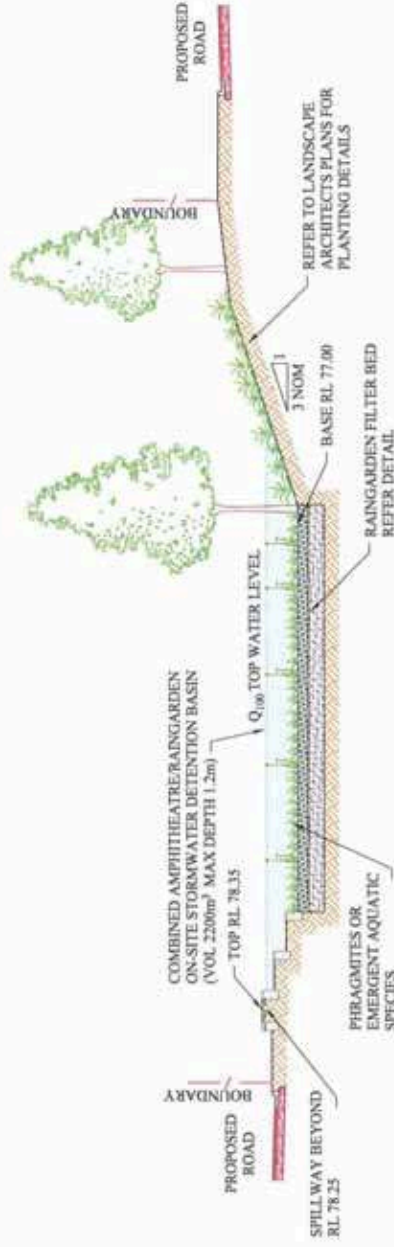


FIGURE I6



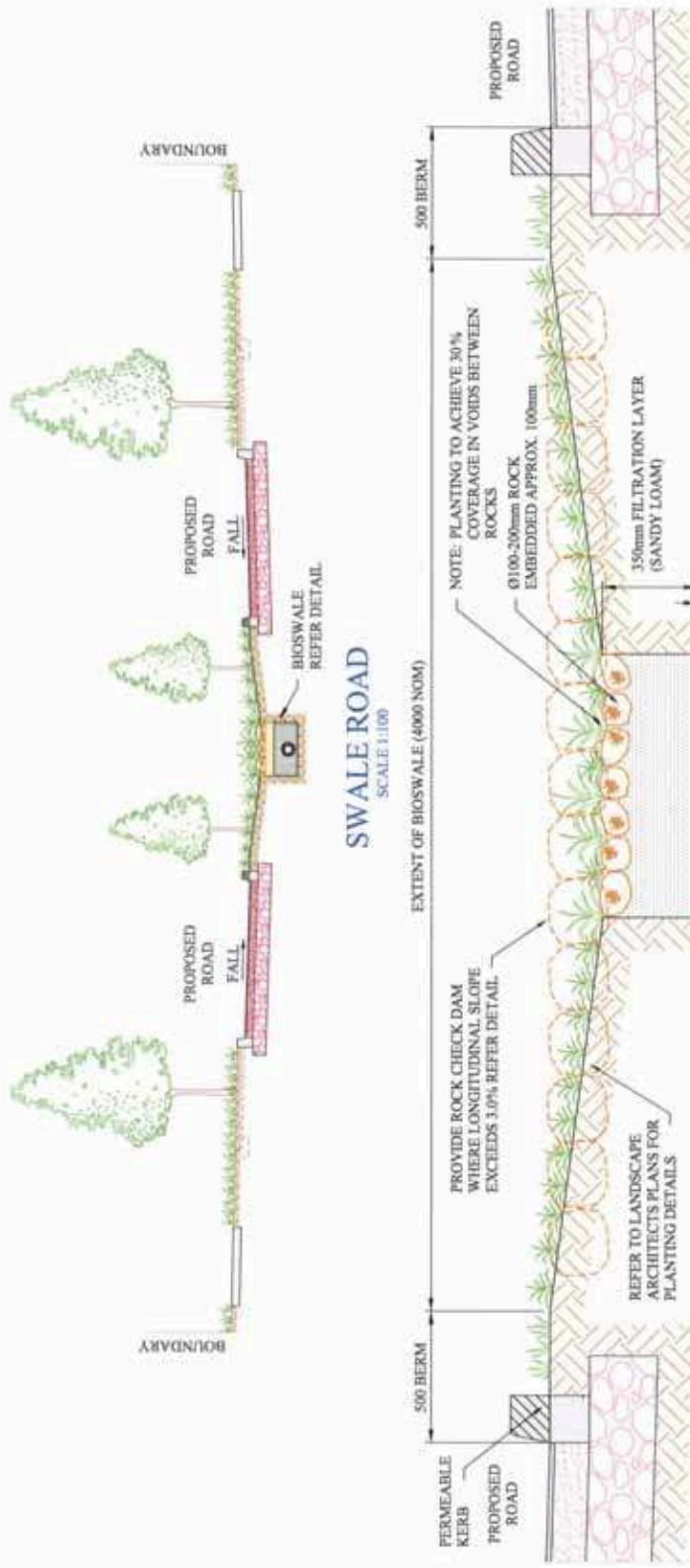
SECTION A-A



SECTION B-B

MINTO URBAN RENEWAL
SCARBOROUGH PARK CROSS SECTIONS





SWALE ROAD
SCALE 1:100

EXTENT OF BIOSWALE (4000 NOM)

NOTE: PLANTING TO ACHIEVE 30% COVERAGE IN VOIDS BETWEEN ROCKS

0100-200mm ROCK EMBEDDED APPROX. 100mm

350mm FILTRATION LAYER (SANDY LOAM)

100mm TRANSITION LAYER (SAND)

150mm DRAINAGE LAYER (GRAVEL NOM 10mm)

IMPERVIOUS LINER

SUBSOIL DRAINAGE LINE

UNDERLYING PIPE DRAINAGE SYSTEM

1000mm

PROVIDE ROCK CHECK DAM WHERE LONGITUDINAL SLOPE EXCEEDS 3.0% REFER DETAIL

REFER TO LANDSCAPE ARCHITECTS PLANS FOR PLANTING DETAILS

500 BERM

FERMEABLE KERB

PROPOSED ROAD

PROPOSED ROAD

FALL

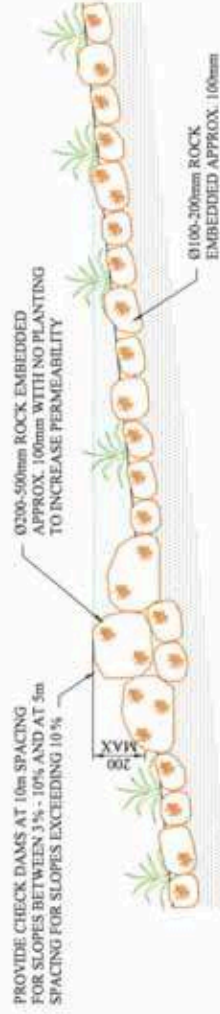
FALL

BIOSWALE REFER DETAIL

BOUNDARY

BOUNDARY

BIOSWALE DETAIL
SCALE 1:20



ROCK CHECK DAM DETAIL
SCALE 1:20

MINTO URBAN RENEWAL SWALE ROAD DETAILS



LEGEND

- SILT FENCING
- DIVISION CHANNEL
- TEMPORARY SEDIMENT BASIN
- SHAKER RAMP AND TRUCK WASH DOWN AREA
- GROSS POLLUTANT TRAP
- LEVEL SPREADER
- SITE BOUNDARY
- STAGE BOUNDARY
- PACKAGE BOUNDARY
- STRAW BALE WEIR

NOTE: ALL DRAINAGE PITS TO RECEIVE SUITABLE EROSION CONTROL TREATMENT.



**MINTO URBAN RENEWAL
SOIL AND WATER MANAGEMENT PLAN - PACKAGE A**











FIGURE 20

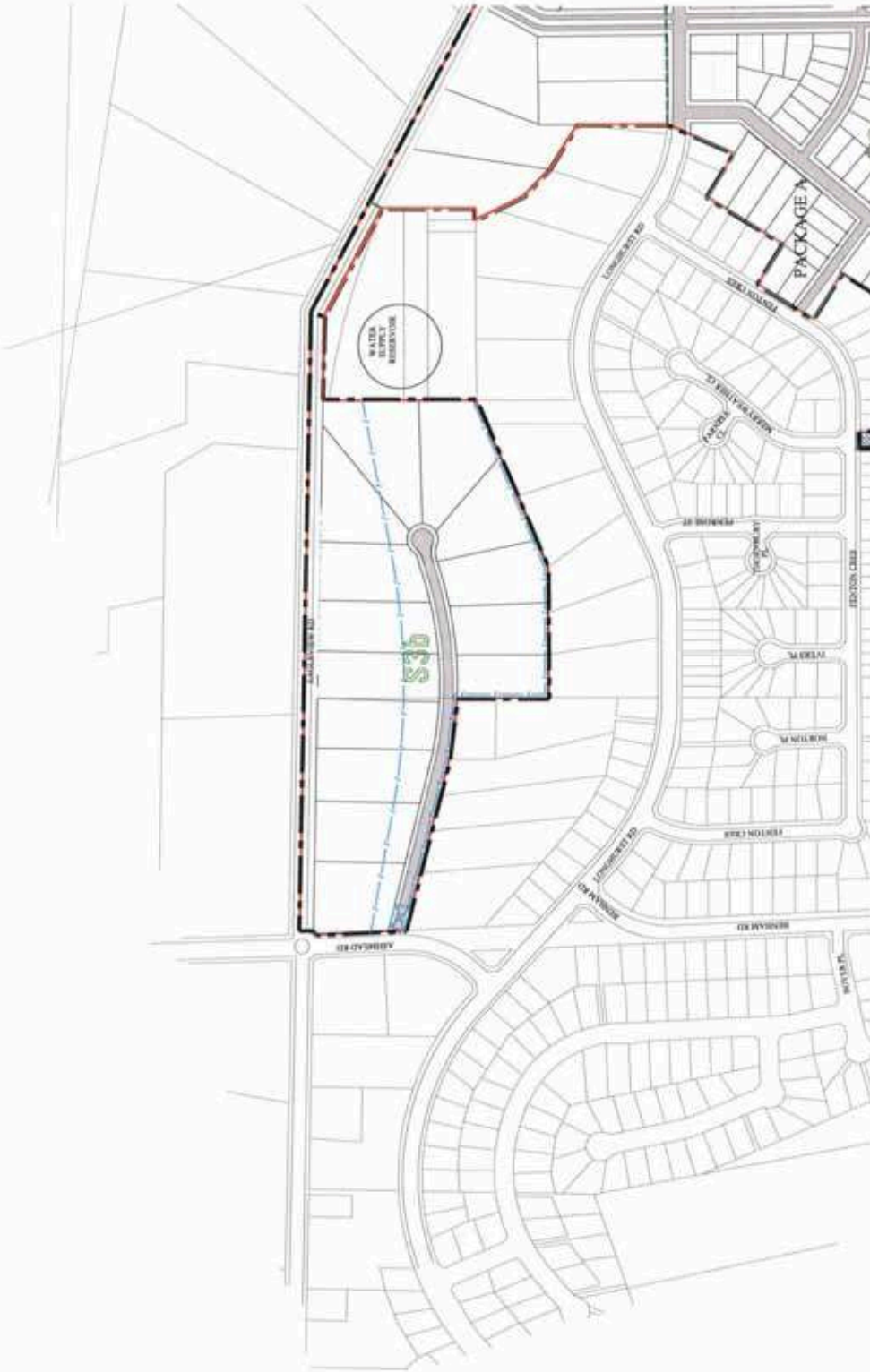
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LEGEND

-  SILT FENCING
-  DIVERSION CHANNEL
-  TEMPORARY SEDIMENT BASIN
-  SHAKER RAMP AND TRUCK WASH DOWN AREA
-  GROSS POLLUTANT TRAP
-  LEVEL SPREADER
-  SITE BOUNDARY
-  STAGE BOUNDARY
-  PACKAGE BOUNDARY
-  STRAW BALE WEIR

NOTE: ALL DRAINAGE PITS TO RECEIVE SUITABLE EROSION CONTROL TREATMENT.



MINTO URBAN RENEWAL SOIL AND WATER MANAGEMENT PLAN - PACKAGE B



FIGURE 21



LEGEND

- SILT FENCING
- DIVERSION CHANNEL
- TEMPORARY SEDIMENT BASIN
- SHAKER RAMP AND TRUCK WASH DOWN AREA
- GROSS POLLUTANT TRAP
- LEVEL SPREADER
- SITE BOUNDARY
- STAGE BOUNDARY
- PACKAGE BOUNDARY
- STRAW BALE WEIR

NOTE: ALL DRAINAGE PITS TO RECEIVE SUITABLE EROSION CONTROL TREATMENT.

**MINTO URBAN RENEWAL
 SOIL AND WATER MANAGEMENT PLAN - PACKAGE C**



FIGURE 22

LEGEND

-  SILT FENCING
-  DIVERSION CHANNEL
-  TEMPORARY SEDIMENT BASIN
-  SHAKER RAMP AND TRUCK WASH DOWN AREA
-  GROSS POLLUTANT TRAP
-  LEVEL SPREADER
-  SITE BOUNDARY
-  STAGE BOUNDARY
-  PACKAGE BOUNDARY
-  STRAW BALE WEIR

NOTE: ALL DRAINAGE PITS TO RECEIVE SUITABLE EROSION CONTROL TREATMENT.



**MINTO URBAN RENEWAL
SOIL AND WATER MANAGEMENT PLAN - PACKAGE D**

SCALE 1:4000
METRES

FIGURE 23



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APPENDIX B: RAFTS MODEL DATA

RAFTS CATCHMENT PARAMETERS

Proposed Redeveloped Catchment

Node	Area (ha)	Impervious Portion	Catchment Slope
Northern Catchment			
1.01	3.27	75%	1.76%
2.01	2.20	35%	4.20%
2.02	2.02	75%	11.50%
2.03	1.16	75%	8.10%
2.04	2.16	75%	3.00%
2.05	1.90	75%	2.90%
2.06	2.37	75%	6.00%
2.07	1.93	75%	3.10%
2.08	0.72	75%	4.30%
2.10	0.87	75%	4.34%
2.11	2.21	75%	5.95%
2.12	0.46	75%	9.40%
2.41	0.76	78%	5.90%
2.42	0.90	75%	4.43%
4.00	3.34	35%	7.00%
4.01	0.64	75%	9.00%
4.02	5.96	75%	8.10%
4.03	2.86	75%	5.00%
4.04	1.62	75%	6.90%
4.05	2.36	75%	2.90%
4.06	1.66	75%	2.40%
4.07	2.08	75%	3.50%
4.10	3.34	35%	6.00%
4.11	0.61	78%	6.00%
4.12	4.53	75%	3.00%
4.13	1.74	75%	3.00%
4.14	1.12	75%	4.80%
4.20	0.70	75%	5.70%
4.21	0.71	75%	3.40%
4.50	0.42	23%	2.70%
4.60	0.71	75%	8.20%
4.61	1.82	75%	8.50%
4.70	1.03	75%	2.20%
4.80	0.99	75%	3.80%
4.90	1.94	75%	2.70%
NC1	3.18	75%	5.00%
NC2	2.70	75%	6.00%
Sub-total	63.12		
Southern / Central Catchment			
1.02	3.78	75%	3.61%
5.01	0.81	75%	5.60%
5.02	0.21	75%	5.56%
5.03	1.06	75%	5.57%
6.01	1.91	40%	7.29%
6.02	1.42	75%	4.34%
6.03	1.49	75%	5.61%
6.04	0.87	75%	3.59%
6.05	0.66	20%	4.65%
6.06	1.49	75%	5.56%

Existing Catchment

Node	Area (ha)	Impervious Portion	Catchment Slope
Northern Catchment			
N1	4.11	23%	6.0%
N10	1.10	63%	3.0%
N11	2.64	43%	3.0%
N12	0.51	6%	13.0%
N13	1.97	13%	10.0%
N14	5.48	7%	7.0%
N15	1.98	65%	9.0%
N16	1.29	26%	1.0%
N17	1.35	10%	6.0%
N18	4.38	9%	7.0%
N19	4.00	69%	5.0%
N2	3.32	35%	7.0%
N20	2.64	35%	6.0%
N21	1.51	32%	5.0%
N22	3.16	65%	5.0%
N23	0.56	0%	7.0%
N24	1.08	35%	7.0%
N25	0.47	55%	2.0%
N26	0.16	31%	4.0%
N27	0.52	58%	3.0%
N28	0.45	58%	4.0%
N29	0.42	60%	3.0%
N3	0.64	75%	9.0%
N30	0.37	62%	2.0%
N31	3.79	61%	1.0%
N32	2.27	53%	5.0%
N4	0.49	59%	6.0%
N5	4.53	67%	3.0%
N6	4.99	75%	3.0%
N7	3.16	30%	7.0%
N8	1.75	59%	5.0%
N9	3.80	55%	6.0%
Sub-total	63.34		
Southern / Central Catchment			
S1	1.47	30%	8.0%
S10	0.45	27%	8.0%
S11	1.08	19%	9.0%
S12	2.71	38%	8.0%
S13	1.21	57%	2.0%
S14	0.48	44%	5.0%
S15	1.47	5%	6.0%
S16	1.58	43%	7.0%
S17	0.19	0%	4.0%
S18	4.01	43%	8.0%
S19	1.92	52%	9.0%
S2	1.70	58%	10.0%
S20	0.62	45%	5.0%
S21	1.33	62%	10.0%
S22	0.75	61%	9.0%

Proposed Redeveloped Catchment

Node	Area (ha)	Impervious Portion	Catchment Slope
6.07	0.94	48%	6.83%
6.11	3.23	75%	8.00%
6.13	1.92	75%	4.48%
6.20	0.74	75%	4.07%
6.30	4.18	75%	7.00%
6.31	1.22	75%	2.86%
6.32	1.20	75%	4.01%
6.33	2.64	75%	6.00%
6.34	1.84	75%	5.20%
6.40	0.88	32%	6.41%
7.01	1.95	65%	3.10%
7.02	1.26	75%	5.80%
7.10	0.97	75%	0.00%
7.11	1.54	75%	7.07%
7.12	1.20	75%	5.22%
8.01	3.22	75%	7.64%
8.02	4.38	70%	6.54%
8.20	1.10	75%	6.54%
8.70	2.13	75%	7.84%
8.71	1.46	60%	8.24%
SC	3.71	75%	3.46%
Sub-total	50.25		
Eastern Catchment			
3a	3.24	31%	3.10%
3B.1	3.07	35%	1.40%
3B.2	4.44	35%	2.50%
Sub-Total	10.75		
Total	124.11		

Existing Catchment

Node	Area (ha)	Impervious Portion	Catchment Slope
S23	2.60	21%	12.0%
S24	0.40	63%	8.0%
S25	4.41	65%	7.0%
S26	0.82	65%	6.0%
S27	0.86	58%	5.0%
S28	2.66	75%	6.0%
S29	2.38	50%	5.0%
S3	0.58	26%	7.0%
S30	2.11	46%	6.0%
S31	4.97	50%	5.0%
S32	2.52	20%	4.0%
S33	0.82	27%	6.4%
S4	0.32	63%	5.0%
S5	0.62	44%	9.0%
S6	0.92	28%	7.0%
S7	1.59	68%	10.0%
S8	1.18	20%	8.0%
S9	3.08	61%	3.0%
SC	3.71	75%	3.5%
Sub-total	47.72		
TOTAL	111.06		

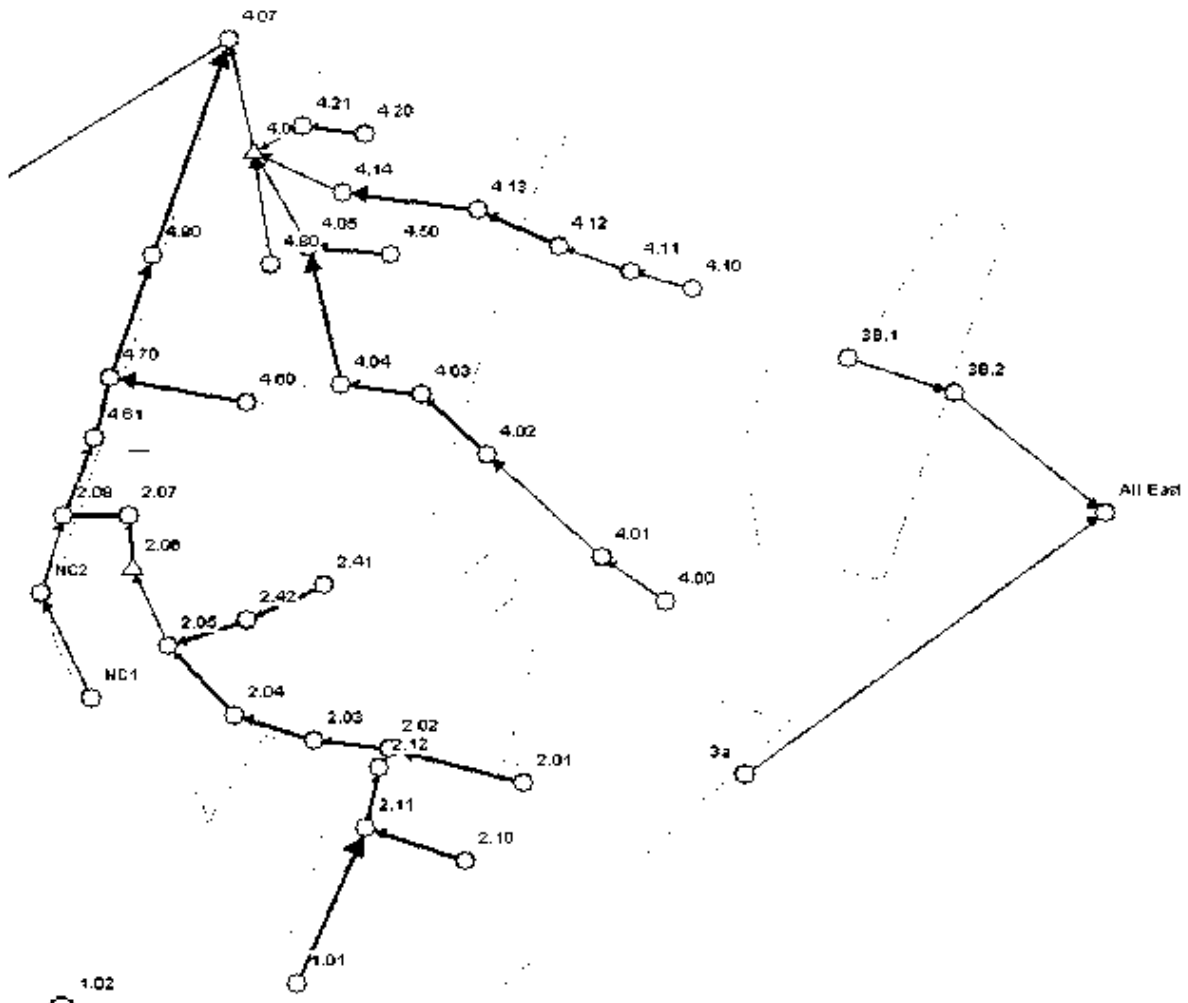


Figure B1: Post Developed RAFTS Schematic - Northern and Eastern Catchments

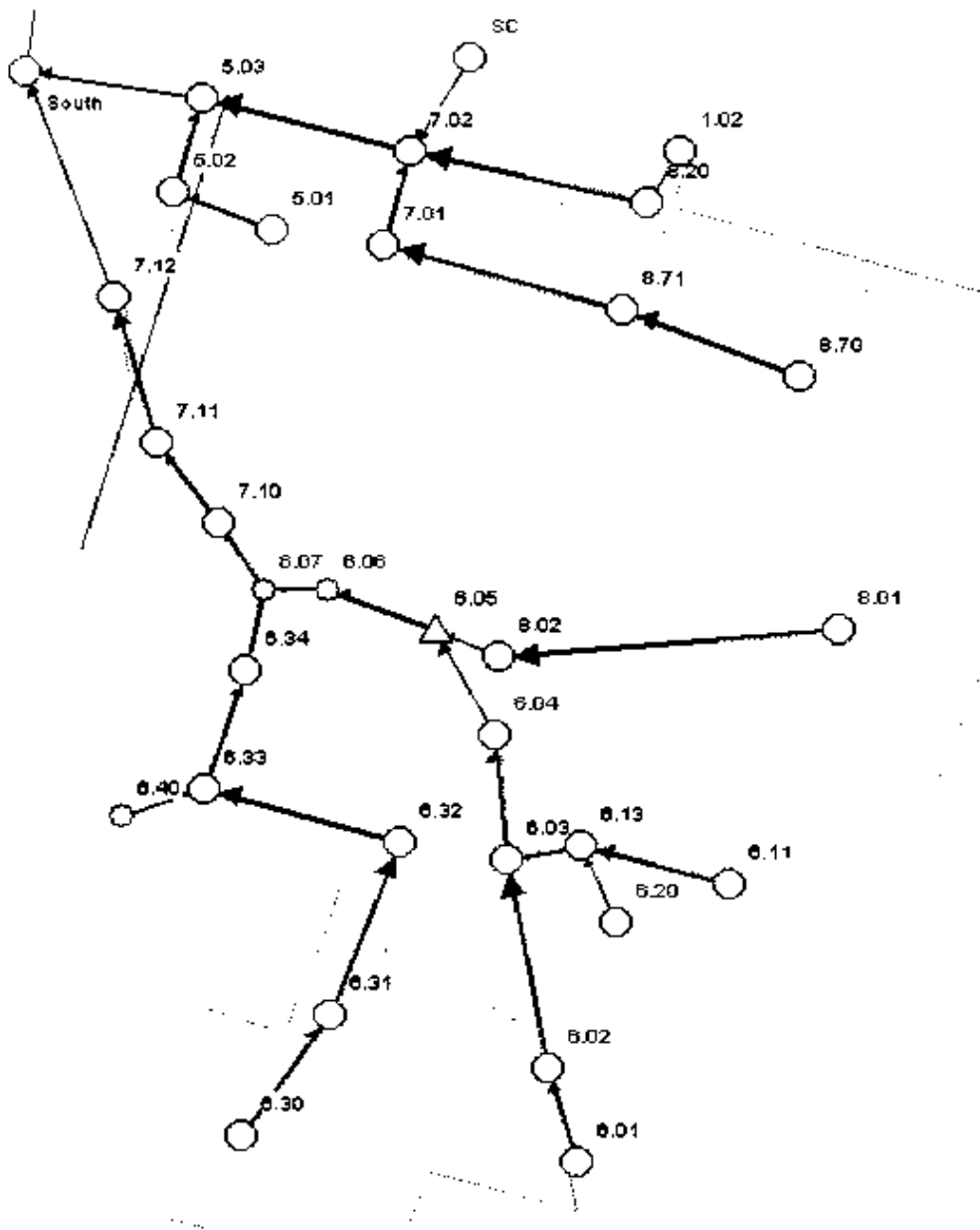


Figure B2: Post Developed RAFTS Schematic - Southern Catchment

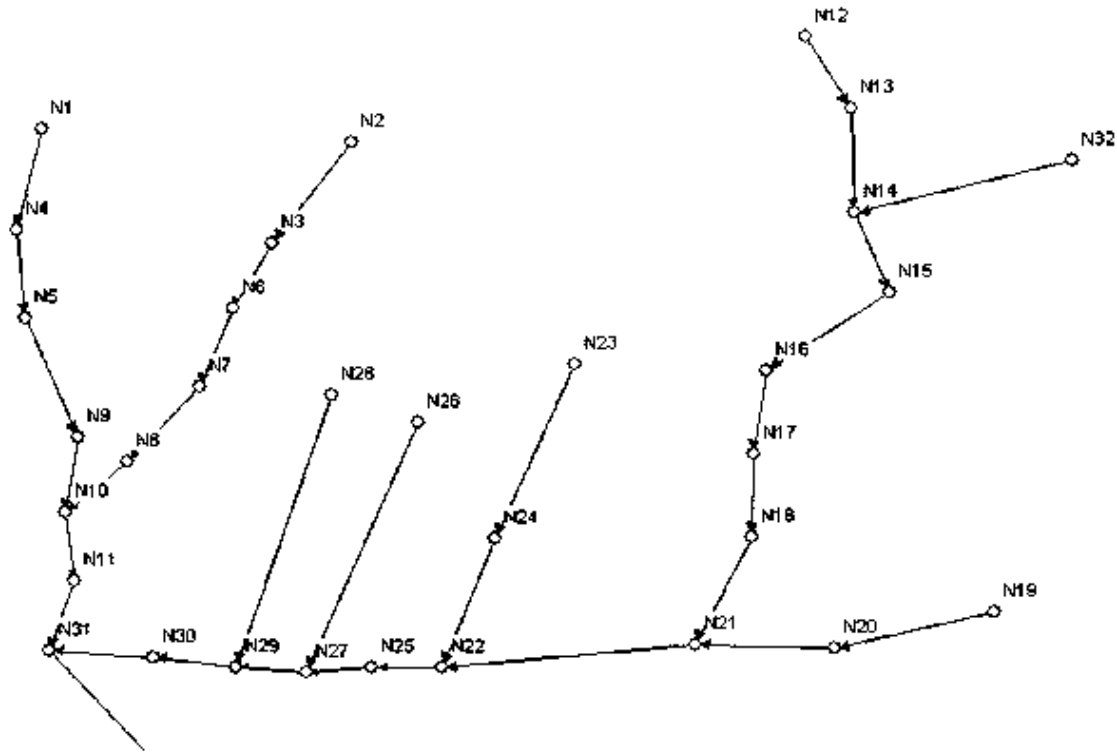


Figure B3: Pre-developed RAFTS Schematic - Northern Catchment

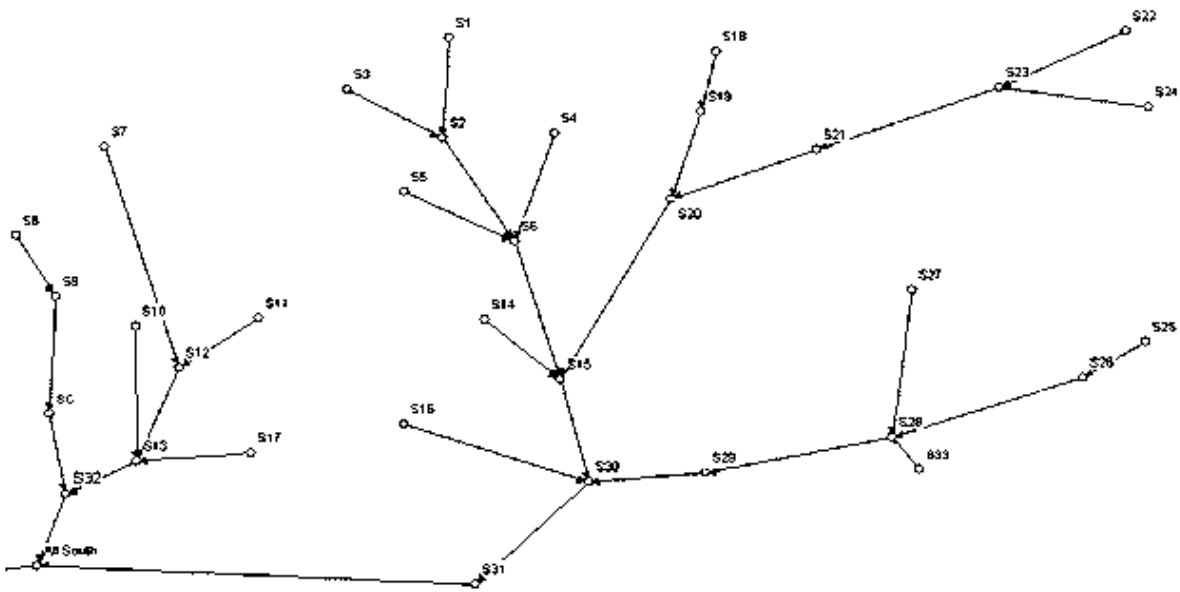


Figure B4: Pre-developed RAFTS Schematic - Southern Catchment

APPENDIX C: PEAK FLOWS FROM RAFTS

Peak RAFTS Flows

Pre-Developed Catchment

100 year ARI

Node	Duration (minutes)								
	15	20	25	30	45	60	90	120	180
N1	0.98	1.24	1.32	1.24	1.15	1.51	1.68	1.52	1.08
N10	8.73	8.88	10.14	9.52	8.08	10.63	11.62	10.68	7.28
N11	9.23	9.44	10.74	10.09	8.65	11.34	12.34	11.57	7.90
N12	0.21	0.22	0.27	0.25	0.20	0.24	0.25	0.23	0.13
N13	0.79	0.99	1.10	1.03	0.89	1.07	1.13	1.03	0.66
N14	2.59	3.36	3.62	3.39	3.10	3.92	4.22	3.84	2.68
N15	3.02	3.62	4.11	3.86	3.58	4.48	4.83	4.57	3.20
N16	3.19	4.01	4.31	4.05	3.78	4.73	5.16	4.88	3.45
N17	3.47	4.39	4.72	4.44	4.16	5.16	5.62	5.38	3.78
N18	4.50	5.55	5.98	5.63	5.34	6.58	7.05	6.95	4.86
N19	1.71	1.64	1.86	1.73	1.44	1.81	1.95	1.77	1.07
N2	0.95	1.18	1.33	1.24	1.08	1.38	1.49	1.32	0.88
N20	2.42	2.40	2.83	2.64	2.16	2.83	3.05	2.78	1.77
N21	8.47	7.69	7.97	7.48	7.31	9.06	9.80	9.91	6.97
N22	7.25	6.80	9.23	8.67	8.49	10.49	11.02	11.23	8.14
N23	0.19	0.23	0.25	0.23	0.20	0.24	0.25	0.23	0.15
N24	0.50	0.64	0.69	0.65	0.58	0.70	0.73	0.66	0.43
N25	7.31	8.89	9.33	8.77	8.60	10.81	11.11	11.45	8.24
N26	0.05	0.07	0.07	0.07	0.06	0.07	0.07	0.07	0.04
N27	7.38	9.02	9.48	8.92	8.75	10.79	11.26	11.61	8.37
N28	0.18	0.18	0.22	0.20	0.16	0.21	0.22	0.20	0.12
N29	7.46	9.17	9.65	9.11	8.96	11.00	11.43	11.80	8.50
N3	1.20	1.36	1.56	1.46	1.26	1.62	1.73	1.59	1.05
N30	7.49	9.20	9.72	9.19	9.05	11.08	11.50	11.88	8.55
N31	15.92	17.88	18.81	17.81	17.18	20.98	22.73	22.74	16.80
N32	0.83	0.82	0.98	0.91	0.75	0.99	1.06	0.95	0.60
N4	1.08	1.39	1.50	1.41	1.29	1.68	1.84	1.68	1.20
N5	2.69	2.77	3.16	2.95	2.51	3.33	3.79	3.34	2.39
N6	3.28	3.11	3.55	3.41	2.78	3.69	4.03	3.63	2.38
N7	4.04	4.11	4.76	4.45	3.74	4.88	5.32	4.83	3.20
N8	4.55	4.55	5.33	4.99	4.19	5.53	5.97	5.48	3.66
N9	3.95	4.00	4.62	4.31	3.65	4.82	5.40	4.81	3.38
S1	0.46	0.58	0.66	0.60	0.52	0.65	0.68	0.61	0.39
S10	0.18	0.19	0.23	0.22	0.17	0.21	0.22	0.20	0.12
S11	0.34	0.44	0.49	0.46	0.39	0.47	0.50	0.45	0.29
S12	1.84	2.13	2.43	2.26	1.90	2.38	2.51	2.29	1.43
S13	2.40	2.75	3.15	2.94	2.46	3.11	3.27	3.01	1.92
S14	0.17	0.20	0.24	0.22	0.17	0.22	0.23	0.21	0.13
S15	6.28	7.25	8.30	7.74	6.54	8.19	8.59	7.97	5.10
S16	0.56	0.61	0.72	0.67	0.55	0.70	0.75	0.67	0.42
S17	0.06	0.07	0.08	0.07	0.07	0.08	0.08	0.08	0.05
S18	1.35	1.50	1.72	1.61	1.35	1.74	1.85	1.68	1.07
S19	1.99	2.20	2.51	2.35	1.98	2.53	2.70	2.48	1.58
S2	1.29	1.49	1.70	1.58	1.33	1.66	1.76	1.58	1.00
S20	3.91	4.45	5.05	4.72	3.99	5.00	5.29	4.89	3.10
S21	1.76	2.05	2.30	2.14	1.82	2.24	2.36	2.17	1.35
S22	0.36	0.32	0.40	0.38	0.29	0.37	0.39	0.36	0.20
S23	1.36	1.54	1.78	1.65	1.35	1.69	1.78	1.64	1.00
S24	0.19	0.17	0.21	0.20	0.16	0.20	0.21	0.19	0.11
S25	1.85	1.75	2.12	1.98	1.55	2.03	2.15	1.98	1.18
S26	2.15	2.07	2.44	2.28	1.83	2.35	2.49	2.33	1.40
S27	0.35	0.36	0.42	0.40	0.31	0.40	0.42	0.39	0.23
S28	3.85	3.66	4.39	4.11	3.24	4.32	4.60	4.23	2.56
S29	4.54	4.38	5.22	4.88	3.94	5.20	5.53	5.16	3.19
S3	0.20	0.24	0.28	0.26	0.21	0.26	0.28	0.25	0.15
S30	11.40	12.55	14.23	13.29	11.44	14.51	15.15	14.30	9.26
S31	12.53	13.56	15.35	14.37	12.59	15.88	16.40	16.09	10.55
S32	5.76	6.28	7.11	6.64	5.63	7.26	7.84	7.07	4.69
S33	0.26	0.32	0.36	0.34	0.29	0.36	0.38	0.34	0.22
S4	0.14	0.13	0.17	0.15	0.12	0.15	0.16	0.15	0.09
S5	0.28	0.26	0.33	0.30	0.23	0.30	0.31	0.29	0.17
S6	1.98	2.19	2.55	2.38	1.96	2.47	2.59	2.39	1.49
S7	0.76	0.70	0.84	0.79	0.64	0.77	0.82	0.76	0.43
S8	0.35	0.48	0.51	0.48	0.42	0.51	0.54	0.48	0.31
S9	1.46	1.49	1.70	1.59	1.34	1.73	1.88	1.68	1.12
SC	3.13	2.90	3.43	3.22	2.57	3.40	3.67	3.33	2.12
All South	16.95	19.17	19.70	18.55	17.63	20.97	21.46	22.63	15.19

Post-Developed Catchment 100 year ARI

Node	Duration (minutes)								
	15	20	25	30	45	60	90	120	180
1.01	1.43	1.40	1.48	1.38	1.20	1.40	1.52	1.41	0.86
1.02	1.71	1.64	1.77	1.66	1.42	1.71	1.83	1.68	1.01
2.01	0.59	0.68	0.77	0.71	0.63	0.85	0.94	0.81	0.58
2.02	4.61	4.39	4.98	4.66	3.84	4.85	5.23	4.80	2.92
2.03	5.03	4.90	5.48	5.06	4.30	5.25	5.71	5.32	3.22
2.04	5.64	5.61	6.20	5.74	4.92	5.98	6.45	5.99	3.78
2.05	6.98	6.94	7.66	7.10	6.11	7.32	7.90	7.40	4.72
2.06	7.91	7.90	8.64	8.06	6.96	8.24	8.82	8.27	5.35
2.07	6.11	6.38	6.34	6.14	5.96	6.40	6.37	6.53	5.20
2.08	8.51	8.95	9.30	8.94	8.18	8.91	9.31	8.87	6.93
2.10	0.41	0.39	0.45	0.42	0.34	0.42	0.45	0.41	0.23
2.11	2.87	2.74	3.01	2.82	2.38	2.84	3.05	2.84	1.66
2.12	3.09	2.98	3.23	3.03	2.56	3.11	3.31	3.09	1.80
2.41	0.37	0.36	0.41	0.36	0.31	0.37	0.39	0.37	0.20
2.42	0.78	0.73	0.86	0.80	0.64	0.79	0.84	0.78	0.45
3A	0.75	0.64	0.93	0.86	0.79	1.06	1.23	1.10	0.82
3B.1	0.70	0.66	0.79	0.74	0.65	0.81	0.96	0.86	0.65
3B.2	1.76	1.74	2.03	1.89	1.70	2.16	2.53	2.26	1.73
4.00	0.98	1.18	1.34	1.25	1.08	1.39	1.50	1.33	0.89
4.01	1.28	1.45	1.89	1.57	1.31	1.71	1.83	1.64	1.06
4.02	4.06	3.88	4.71	4.41	3.44	4.54	4.82	4.43	2.66
4.03	5.20	5.04	5.90	5.53	4.47	5.67	6.05	5.70	3.43
4.04	5.85	5.57	6.54	6.11	4.93	6.48	6.90	6.39	3.86
4.05	6.76	6.63	7.53	7.04	5.82	7.56	7.98	7.57	4.60
4.06	12.93	12.47	14.35	13.41	10.97	14.16	15.22	14.06	8.70
4.07	17.38	18.02	18.63	18.03	17.02	18.62	19.35	18.31	14.91
4.10	0.94	1.14	1.27	1.19	1.04	1.35	1.47	1.29	0.88
4.11	1.24	1.40	1.60	1.50	1.26	1.65	1.78	1.59	1.05
4.12	3.27	3.07	3.68	3.45	2.73	3.65	3.94	3.57	2.25
4.13	3.96	3.77	4.45	4.15	3.33	4.38	4.72	4.30	2.72
4.14	4.37	4.24	4.91	4.58	3.69	4.84	5.25	4.88	3.01
4.20	0.34	0.32	0.37	0.35	0.28	0.34	0.36	0.33	0.19
4.21	0.66	0.62	0.72	0.67	0.54	0.67	0.71	0.66	0.38
4.50	0.10	0.15	0.15	0.14	0.13	0.17	0.18	0.16	0.11
4.60	0.35	0.33	0.39	0.36	0.30	0.35	0.37	0.35	0.19
4.61	9.25	9.51	9.90	9.51	8.72	9.57	9.99	9.46	7.37
4.70	9.98	10.12	10.67	10.23	9.30	10.29	10.76	9.98	7.81
4.80	0.46	0.44	0.51	0.47	0.38	0.47	0.50	0.47	0.27
4.90	10.39	10.59	11.32	10.83	9.76	11.05	11.60	10.49	8.26
5.01	0.39	0.37	0.44	0.41	0.33	0.40	0.42	0.39	0.22
5.02	0.49	0.46	0.54	0.50	0.40	0.49	0.52	0.48	0.27
5.03	7.81	7.46	8.42	7.96	6.56	8.06	8.54	8.02	4.68
6.01	0.65	0.75	0.85	0.78	0.66	0.85	0.90	0.80	0.51
6.02	1.25	1.31	1.52	1.40	1.15	1.49	1.58	1.42	0.89
6.03	4.53	4.33	5.10	4.76	3.81	4.91	5.20	4.87	2.87
6.04	4.82	4.72	5.47	5.10	4.14	5.33	5.68	5.28	3.11
6.05	8.41	7.99	9.47	8.82	7.07	9.11	9.62	8.92	5.32
6.06	5.14	5.46	5.42	5.30	5.16	5.37	5.48	5.47	4.63
6.07	10.77	10.43	11.39	10.86	9.60	11.21	11.77	11.15	8.09
6.11	1.54	1.48	1.66	1.55	1.30	1.55	1.64	1.53	0.87
6.13	2.74	2.60	2.97	2.77	2.27	2.79	2.96	2.77	1.59
6.20	0.35	0.33	0.38	0.35	0.29	0.35	0.38	0.35	0.20
6.30	1.95	1.87	2.09	1.96	1.64	1.89	2.10	1.95	1.12
6.31	2.45	2.38	2.62	2.45	2.06	2.50	2.68	2.53	1.45
6.32	2.97	2.94	3.19	3.00	2.53	3.13	3.34	3.13	1.77
6.33	4.55	4.32	4.87	4.53	3.76	4.79	5.08	4.73	2.74
6.34	5.26	5.15	5.70	5.31	4.46	5.55	5.91	5.56	3.21
6.40	0.30	0.35	0.39	0.36	0.31	0.39	0.41	0.38	0.23
7.01	2.36	2.22	2.65	2.49	1.99	2.52	2.67	2.49	1.48
7.02	6.82	6.48	7.33	6.93	5.73	7.01	7.46	6.98	4.12
7.10	10.73	10.52	11.50	10.96	9.62	11.37	11.81	10.93	8.16
7.11	11.08	10.98	12.04	11.43	10.08	11.65	12.23	11.46	8.47
7.12	11.42	11.47	12.40	11.78	10.54	12.05	12.60	11.91	8.78
8.01	1.53	1.47	1.65	1.54	1.29	1.54	1.63	1.52	0.87
8.02	3.42	3.21	3.74	3.48	2.81	3.54	3.73	3.44	2.04
8.20	2.29	2.15	2.37	2.22	1.88	2.26	2.40	2.23	1.31
8.70	1.04	0.97	1.11	1.04	0.88	1.03	1.09	1.03	0.57
8.71	1.61	1.53	1.82	1.69	1.38	1.68	1.78	1.70	0.96
NC1	1.47	1.40	1.58	1.45	1.23	1.48	1.57	1.46	0.85
NC2	2.75	2.59	2.92	2.72	2.29	2.76	2.92	2.72	1.58
SC	1.68	1.61	1.74	1.63	1.39	1.67	1.79	1.65	0.99
South	18.66	18.32	20.53	19.48	16.46	19.64	20.78	19.08	13.46

Post-Developed Catchment 50 year ARI

Node	Duration (minutes)								
	15	20	25	30	45	60	90	120	180
1.01	1.27	1.26	1.32	1.22	1.08	1.25	1.36	1.25	0.77
1.02	1.50	1.47	1.58	1.47	1.26	1.52	1.64	1.50	0.91
2.01	0.52	0.58	0.64	0.60	0.52	0.71	0.83	0.72	0.52
2.02	4.02	3.86	4.38	4.05	3.40	4.25	4.66	4.22	2.81
2.03	4.34	4.30	4.73	4.45	3.79	4.62	5.01	4.72	2.68
2.04	4.98	4.95	5.38	5.06	4.32	5.28	5.69	5.31	3.37
2.05	6.13	6.13	6.61	6.14	5.36	6.35	6.91	6.54	4.20
2.06	6.91	6.96	7.42	6.91	6.11	7.17	7.71	7.32	4.77
2.07	5.59	5.80	5.75	5.58	5.46	5.83	5.79	5.99	4.74
2.08	7.82	8.10	8.28	8.09	7.42	8.13	8.41	8.06	6.36
2.10	0.36	0.35	0.39	0.36	0.30	0.38	0.40	0.37	0.21
2.11	2.53	2.46	2.65	2.47	2.11	2.54	2.73	2.56	1.60
2.12	2.69	2.64	2.84	2.62	2.29	2.72	2.96	2.73	1.62
2.41	0.33	0.32	0.36	0.33	0.28	0.33	0.35	0.33	0.18
2.42	0.69	0.66	0.74	0.69	0.57	0.71	0.75	0.71	0.40
4.00	0.82	1.01	1.12	1.04	0.92	1.20	1.33	1.17	0.80
4.01	1.10	1.25	1.43	1.33	1.13	1.49	1.63	1.45	0.98
4.02	3.57	3.40	4.08	3.79	3.01	4.02	4.31	3.95	2.40
4.03	4.53	4.43	5.08	4.73	3.85	5.04	5.43	5.08	3.08
4.04	5.14	4.98	5.70	5.30	4.29	5.73	6.19	5.68	3.47
4.05	5.96	5.92	6.57	6.13	5.10	6.69	7.16	6.73	4.12
4.06	11.48	11.09	12.49	11.62	9.66	12.43	13.60	12.53	7.80
4.07	16.03	16.54	17.13	16.57	15.52	16.99	17.65	16.74	13.61
4.10	0.80	0.97	1.07	0.96	0.88	1.16	1.30	1.13	0.79
4.11	1.07	1.20	1.36	1.25	1.08	1.43	1.58	1.39	0.94
4.12	2.86	2.71	3.21	2.97	2.38	3.20	3.51	3.16	2.03
4.13	3.48	3.33	3.86	3.57	2.90	3.83	4.21	3.81	2.44
4.14	3.88	3.76	4.26	3.95	3.25	4.28	4.69	4.27	2.70
4.20	0.30	0.28	0.33	0.30	0.25	0.31	0.32	0.30	0.17
4.21	0.58	0.55	0.62	0.58	0.48	0.59	0.63	0.58	0.34
4.50	0.08	0.11	0.11	0.10	0.10	0.15	0.16	0.14	0.10
4.60	0.31	0.29	0.34	0.32	0.26	0.31	0.33	0.31	0.17
4.61	8.36	8.49	8.99	8.65	7.91	8.65	9.03	8.57	5.71
4.70	8.98	9.05	9.59	9.24	8.42	9.33	9.72	9.07	7.13
4.80	0.40	0.39	0.43	0.40	0.34	0.42	0.45	0.41	0.24
4.90	9.54	9.61	10.20	9.87	8.82	9.96	10.41	9.52	7.47
5.01	0.34	0.33	0.38	0.35	0.29	0.36	0.38	0.35	0.20
5.02	0.43	0.40	0.47	0.44	0.36	0.44	0.47	0.43	0.25
5.03	6.86	6.63	7.55	7.01	5.76	7.21	7.74	7.14	4.22
6.01	0.54	0.63	0.72	0.66	0.56	0.74	0.80	0.71	0.46
6.02	1.06	1.12	1.30	1.21	1.00	1.30	1.40	1.26	0.80
6.03	3.94	3.91	4.45	4.12	3.30	4.35	4.69	4.33	2.59
6.04	4.29	4.24	4.76	4.42	3.62	4.74	5.07	4.72	2.80
6.05	7.41	7.14	8.24	7.67	6.20	8.12	8.56	7.97	4.79
6.06	4.81	5.12	5.07	4.97	4.86	4.99	5.07	5.18	4.34
6.07	9.62	9.53	10.30	9.80	8.78	10.05	10.64	10.09	7.58
6.11	1.37	1.29	1.47	1.36	1.12	1.39	1.47	1.38	0.78
6.13	2.40	2.34	2.61	2.42	1.98	2.48	2.66	2.47	1.43
6.20	0.31	0.30	0.33	0.31	0.26	0.32	0.34	0.31	0.18
6.30	1.73	1.65	1.85	1.72	1.44	1.77	1.88	1.74	1.01
6.31	2.14	2.17	2.29	2.13	1.86	2.24	2.40	2.28	1.31
6.32	2.64	2.63	2.83	2.64	2.26	2.77	2.99	2.80	1.60
6.33	3.95	3.81	4.28	3.94	3.30	4.19	4.55	4.15	2.45
6.34	4.52	4.51	4.97	4.59	3.85	4.83	5.24	4.94	2.90
6.40	0.23	0.30	0.34	0.31	0.27	0.35	0.37	0.33	0.21
7.01	2.08	1.96	2.35	2.19	1.73	2.26	2.40	2.24	1.33
7.02	5.98	5.79	6.57	6.09	5.05	6.28	6.73	6.24	3.71
7.10	9.63	9.56	10.38	9.85	8.73	10.19	10.72	10.10	7.57
7.11	9.98	9.98	10.73	10.20	9.18	10.53	11.01	10.71	7.91
7.12	10.25	10.39	10.99	10.45	9.54	10.77	11.31	11.10	8.18
8.01	1.36	1.28	1.45	1.35	1.12	1.38	1.46	1.37	0.78
8.02	3.00	2.87	3.26	3.04	2.47	3.14	3.35	3.09	1.84
8.20	1.99	1.91	2.12	1.97	1.65	2.01	2.15	1.99	1.18
8.70	0.91	0.85	0.99	0.92	0.74	0.93	0.98	0.93	0.52
8.71	1.41	1.34	1.60	1.50	1.18	1.52	1.60	1.55	0.87
3a	0.65	0.70	0.79	0.72	0.70	0.87	1.07	0.97	0.73
3B.1	0.60	0.58	0.69	0.64	0.55	0.70	0.82	0.72	0.55
3B.2	1.52	1.50	1.75	1.62	1.46	1.84	2.18	1.93	1.49
NC1	1.30	1.24	1.38	1.29	1.07	1.32	1.41	1.31	0.77
NC2	2.42	2.29	2.59	2.41	1.98	2.47	2.62	2.45	1.42
SC	1.47	1.44	1.54	1.44	1.23	1.48	1.60	1.47	0.89
South	16.88	16.52	18.33	17.33	14.88	17.56	18.74	17.43	12.40

Post-Developed Catchment 20 year ARI

Node	Duration (minutes)								
	15	20	25	30	45	60	90	120	180
1.01	1.16	1.16	1.22	1.12	0.97	1.13	1.23	1.14	0.69
1.02	1.35	1.35	1.48	1.36	1.12	1.35	1.48	1.35	0.83
2.01	0.42	0.45	0.58	0.52	0.42	0.59	0.72	0.63	0.46
2.02	3.60	3.53	4.05	3.75	3.03	3.81	4.17	3.86	2.37
2.03	3.96	3.87	4.43	4.10	3.34	4.13	4.53	4.29	2.63
2.04	4.48	4.48	4.98	4.59	3.85	4.70	5.12	4.76	3.10
2.05	5.40	5.46	5.99	5.47	4.80	5.52	6.02	5.83	3.89
2.06	6.09	6.10	6.72	6.19	5.45	6.23	6.81	6.53	4.41
2.07	5.55	5.33	5.30	5.09	4.99	5.25	5.25	5.26	4.37
2.08	6.99	7.25	7.88	7.50	6.69	7.31	7.69	7.69	5.83
2.10	0.32	0.31	0.36	0.33	0.27	0.33	0.36	0.33	0.19
2.11	2.27	2.24	2.48	2.28	1.91	2.28	2.48	2.33	1.37
2.12	2.45	2.41	2.64	2.47	2.06	2.47	2.66	2.52	1.48
2.41	0.29	0.29	0.33	0.30	0.24	0.30	0.32	0.30	0.17
2.42	0.61	0.61	0.68	0.63	0.51	0.64	0.69	0.64	0.37
4.00	0.68	0.76	0.96	0.85	0.71	1.03	1.19	1.02	0.72
4.01	0.93	0.97	1.25	1.12	0.89	1.29	1.46	1.28	0.87
4.02	3.12	2.94	3.68	3.36	2.53	3.56	3.93	3.54	2.19
4.03	4.00	4.02	4.60	4.24	3.29	4.42	4.98	4.51	2.82
4.04	4.59	4.53	5.25	4.84	3.78	5.04	5.64	5.04	3.18
4.05	5.34	5.35	6.02	5.55	4.47	5.86	6.51	5.95	3.78
4.06	10.30	10.08	11.45	10.55	8.50	10.87	12.24	11.12	7.12
4.07	14.52	14.78	16.01	15.33	13.84	15.41	16.72	15.63	12.59
4.10	0.67	0.72	0.90	0.82	0.67	0.97	1.15	0.98	0.72
4.11	0.91	0.91	1.17	1.07	0.85	1.22	1.41	1.21	0.86
4.12	2.52	2.40	2.91	2.67	2.06	2.80	3.15	2.80	1.83
4.13	3.05	3.03	3.49	3.20	2.55	3.33	3.76	3.36	2.20
4.14	3.49	3.44	3.90	3.60	2.87	3.75	4.22	3.78	2.44
4.20	0.26	0.26	0.30	0.28	0.22	0.28	0.29	0.27	0.16
4.21	0.51	0.50	0.58	0.53	0.42	0.53	0.57	0.53	0.31
4.50	0.06	0.08	0.09	0.09	0.08	0.11	0.15	0.12	0.09
4.60	0.27	0.26	0.32	0.29	0.22	0.28	0.30	0.29	0.16
4.61	7.52	7.78	8.47	8.05	7.23	7.81	8.25	8.43	6.17
4.70	8.19	8.14	9.03	8.57	7.59	8.39	8.84	9.11	6.54
4.80	0.36	0.33	0.40	0.37	0.30	0.37	0.41	0.37	0.22
4.80	8.69	8.44	9.55	9.05	7.84	9.00	9.48	9.60	6.83
5.01	0.30	0.30	0.35	0.32	0.25	0.32	0.34	0.32	0.18
5.02	0.37	0.37	0.43	0.40	0.32	0.40	0.43	0.39	0.23
5.03	6.15	6.00	6.97	6.44	5.10	6.48	7.01	6.43	3.84
6.01	0.44	0.49	0.63	0.57	0.45	0.64	0.72	0.63	0.42
6.02	0.93	0.90	1.16	1.06	0.80	1.14	1.27	1.13	0.73
6.03	3.54	3.55	4.05	3.70	2.97	3.86	4.27	3.85	2.37
6.04	3.88	3.86	4.37	4.00	3.23	4.24	4.64	4.24	2.56
6.05	6.60	6.45	7.58	6.94	5.48	7.21	7.91	7.19	4.38
6.06	4.55	4.74	4.85	4.72	4.42	4.64	4.70	5.09	4.24
6.07	8.70	8.61	9.66	9.13	7.86	9.28	9.77	9.38	7.16
6.11	1.19	1.16	1.37	1.25	0.98	1.26	1.34	1.26	0.72
6.13	2.12	2.13	2.43	2.22	1.77	2.22	2.42	2.23	1.31
6.20	0.27	0.26	0.31	0.28	0.23	0.28	0.31	0.28	0.16
6.30	1.52	1.49	1.71	1.58	1.27	1.58	1.72	1.58	0.93
6.31	1.98	2.01	2.13	1.97	1.65	2.04	2.23	2.06	1.19
6.32	2.40	2.43	2.62	2.41	2.00	2.50	2.73	2.51	1.48
6.33	3.47	3.40	3.92	3.61	2.83	3.65	4.03	3.72	2.24
6.34	3.98	4.03	4.55	4.19	3.31	4.27	4.59	4.38	2.64
6.40	0.18	0.24	0.30	0.27	0.22	0.30	0.34	0.30	0.19
7.01	1.82	1.79	2.14	1.97	1.52	2.04	2.21	2.03	1.22
7.02	5.37	5.27	6.05	5.62	4.48	5.67	6.12	5.65	3.38
7.10	8.75	8.62	9.66	9.11	7.87	9.10	9.66	9.33	6.95
7.11	9.00	9.03	9.96	9.44	8.24	9.61	9.94	9.85	7.21
7.12	9.21	9.36	10.17	9.64	8.55	9.81	10.25	10.28	7.51
8.01	1.19	1.15	1.36	1.24	0.98	1.25	1.34	1.25	0.71
8.02	2.63	2.62	3.02	2.77	2.19	2.78	3.03	2.80	1.68
8.20	1.77	1.73	1.92	1.83	1.47	1.80	1.96	1.80	1.07
8.70	0.79	0.77	0.92	0.85	0.66	0.85	0.90	0.85	0.47
8.71	1.21	1.22	1.47	1.35	1.01	1.40	1.49	1.39	0.79
3a	0.53	0.55	0.70	0.63	0.57	0.71	0.91	0.83	0.62
3B.1	0.53	0.51	0.63	0.58	0.44	0.61	0.71	0.61	0.47
3B.2	1.32	1.26	1.60	1.46	1.18	1.55	1.69	1.61	1.27
NC1	1.15	1.14	1.29	1.19	0.95	1.18	1.28	1.19	0.70
NC2	2.13	2.11	2.41	2.22	1.77	2.20	2.40	2.22	1.30
SC	1.32	1.32	1.45	1.34	1.10	1.33	1.45	1.33	0.81
South	15.34	14.86	16.86	15.94	13.26	15.87	18.83	16.16	11.35

Post-Developed Catchment 5 year ARI

Node	Duration (minutes)								
	15	20	25	30	45	60	90	120	180
1.01	0.89	0.89	0.92	0.85	0.75	0.83	0.91	0.83	0.49
1.02	1.04	1.05	1.08	1.00	0.87	0.99	1.10	0.99	0.62
2.01	0.28	0.28	0.36	0.33	0.29	0.38	0.48	0.42	0.32
2.02	2.71	2.71	2.99	2.73	2.24	2.81	3.11	2.79	1.76
2.03	2.94	2.90	3.24	2.92	2.51	3.01	3.34	3.08	1.96
2.04	3.43	3.43	3.63	3.38	3.00	3.41	3.84	3.47	2.31
2.05	4.36	4.37	4.52	4.27	3.83	4.29	4.74	4.31	2.90
2.06	5.01	5.02	5.23	4.91	4.38	4.95	5.45	4.97	3.30
2.07	4.27	4.35	4.48	4.48	4.72	4.15	4.52	4.48	4.54
2.08	5.99	5.61	6.38	6.04	5.84	5.89	6.20	5.92	5.83
2.10	0.24	0.24	0.26	0.24	0.20	0.24	0.27	0.24	0.15
2.11	1.74	1.76	1.83	1.69	1.44	1.67	1.87	1.66	1.02
2.12	1.87	1.88	1.98	1.83	1.54	1.81	2.03	1.80	1.09
2.41	0.22	0.22	0.24	0.22	0.18	0.22	0.24	0.22	0.13
2.42	0.46	0.46	0.50	0.46	0.39	0.46	0.51	0.46	0.28
4.00	0.44	0.46	0.59	0.54	0.45	0.62	0.80	0.72	0.52
4.01	0.62	0.62	0.79	0.73	0.56	0.82	1.02	0.87	0.63
4.02	2.24	2.27	2.57	2.37	1.90	2.47	2.86	2.46	1.64
4.03	3.02	3.08	3.25	3.05	2.57	3.11	3.60	3.12	2.12
4.04	3.44	3.46	3.65	3.40	2.94	3.51	4.04	3.52	2.40
4.05	4.07	4.06	4.28	4.00	3.51	4.08	4.64	4.09	2.84
4.06	7.78	7.77	8.20	7.64	6.65	7.73	8.76	7.75	5.31
4.07	12.29	12.25	12.71	12.53	11.53	12.06	12.54	12.54	12.25
4.10	0.44	0.45	0.56	0.53	0.45	0.60	0.77	0.69	0.50
4.11	0.61	0.61	0.78	0.71	0.54	0.78	0.97	0.83	0.61
4.12	1.84	1.83	2.06	1.90	1.54	1.95	2.26	1.95	1.33
4.13	2.30	2.30	2.50	2.27	1.94	2.32	2.73	2.34	1.62
4.14	2.61	2.62	2.73	2.54	2.20	2.59	2.97	2.60	1.80
4.20	0.19	0.19	0.22	0.20	0.16	0.20	0.22	0.21	0.12
4.21	0.38	0.39	0.42	0.39	0.33	0.39	0.43	0.39	0.24
4.50	0.04	0.05	0.06	0.05	0.05	0.06	0.08	0.08	0.06
4.60	0.20	0.20	0.22	0.21	0.16	0.21	0.23	0.22	0.12
4.61	6.26	6.17	6.74	6.53	6.16	6.24	6.99	6.28	5.94
4.70	6.66	6.57	7.13	6.78	6.15	6.53	7.20	6.59	5.95
4.80	0.27	0.27	0.29	0.27	0.23	0.27	0.30	0.27	0.17
4.90	6.98	7.00	7.46	7.16	6.46	6.81	7.39	6.99	6.22
5.01	0.22	0.22	0.25	0.23	0.19	0.23	0.26	0.23	0.14
5.02	0.28	0.30	0.31	0.28	0.25	0.29	0.33	0.29	0.17
5.03	4.63	4.66	4.98	4.59	3.89	4.62	5.25	4.61	2.90
6.01	0.29	0.31	0.40	0.36	0.29	0.42	0.51	0.43	0.31
6.02	0.67	0.67	0.82	0.74	0.58	0.80	0.92	0.79	0.55
6.03	2.68	2.68	2.92	2.71	2.28	2.76	3.13	2.76	1.80
6.04	2.91	2.91	3.17	2.95	2.49	3.00	3.38	3.00	1.95
6.05	4.94	4.96	5.43	5.02	4.23	5.14	5.81	5.14	3.33
6.06	4.21	4.25	4.27	4.07	4.19	4.42	4.31	4.23	4.39
6.07	7.32	7.42	7.60	7.21	6.88	7.56	7.82	7.31	6.15
6.11	0.89	0.91	0.98	0.89	0.75	0.93	1.02	0.93	0.55
6.13	1.61	1.62	1.72	1.58	1.37	1.62	1.81	1.62	1.00
6.20	0.20	0.21	0.22	0.21	0.17	0.20	0.23	0.21	0.13
6.30	1.15	1.16	1.26	1.14	0.97	1.16	1.29	1.16	0.71
6.31	1.49	1.49	1.55	1.43	1.25	1.46	1.62	1.47	0.91
6.32	1.81	1.80	1.89	1.71	1.53	1.71	1.98	1.75	1.11
6.33	2.52	2.51	2.69	2.50	2.23	2.59	2.86	2.59	1.70
6.34	2.97	2.97	3.15	2.97	2.66	2.99	3.36	3.02	2.01
6.40	0.11	0.12	0.16	0.14	0.12	0.20	0.24	0.20	0.15
7.01	1.36	1.37	1.47	1.37	1.15	1.39	1.67	1.40	0.92
7.02	4.04	4.08	4.35	4.01	3.42	4.03	4.61	4.02	2.55
7.10	7.23	7.27	7.59	7.08	6.81	7.37	7.92	7.35	5.87
7.11	7.63	7.69	7.82	7.50	7.14	7.80	8.28	7.75	6.12
7.12	7.96	8.05	8.05	7.78	7.32	8.13	8.36	7.96	6.32
8.01	0.89	0.91	0.97	0.88	0.75	0.92	1.02	0.92	0.55
8.02	1.99	2.00	2.17	1.99	1.70	2.04	2.27	2.04	1.28
8.20	1.34	1.35	1.43	1.32	1.12	1.32	1.46	1.32	0.81
8.70	0.59	0.60	0.65	0.59	0.49	0.63	0.69	0.63	0.36
8.71	0.91	0.92	1.01	0.92	0.77	0.98	1.12	0.98	0.61
3a	0.37	0.37	0.46	0.41	0.37	0.47	0.58	0.51	0.39
3B.1	0.39	0.39	0.43	0.40	0.33	0.41	0.50	0.41	0.31
3B.2	0.95	0.96	1.10	1.00	0.80	1.06	1.27	1.06	0.81
NC1	0.67	0.90	0.93	0.85	0.74	0.88	0.97	0.87	0.54
NC2	1.61	1.66	1.72	1.58	1.37	1.64	1.81	1.64	0.99
SC	1.02	1.03	1.06	0.98	0.85	0.97	1.08	0.97	0.61
South	12.54	12.15	13.03	12.37	11.16	12.28	13.42	12.49	9.18

Post-Developed Catchment 2 year AR1

Node	Duration (minutes)								
	15	20	25	30	45	60	90	120	180
1.01	0.70	0.70	0.71	0.66	0.59	0.48	0.68	0.63	0.36
1.02	0.81	0.82	0.83	0.76	0.68	0.56	0.81	0.74	0.43
2.01	0.22	0.22	0.24	0.22	0.19	0.16	0.30	0.26	0.19
2.02	2.09	2.10	2.20	2.01	1.76	1.46	2.23	1.99	1.24
2.03	2.34	2.35	2.46	2.25	1.97	1.63	2.56	2.23	1.39
2.04	2.79	2.80	2.93	2.68	2.35	1.94	3.02	2.65	1.64
2.05	3.56	3.59	3.72	3.40	3.00	2.47	3.81	3.37	2.07
2.06	4.07	4.10	4.24	3.88	3.44	2.82	4.34	3.84	2.36
2.07	4.35	4.34	4.39	4.67	3.79	3.94	3.99	4.35	3.78
2.08	5.31	4.95	5.22	5.69	4.61	4.45	5.10	5.55	4.74
2.10	0.19	0.19	0.19	0.18	0.16	0.13	0.20	0.18	0.11
2.11	1.35	1.35	1.39	1.28	1.13	0.94	1.37	1.26	0.73
2.12	1.45	1.45	1.50	1.38	1.22	1.01	1.49	1.35	0.80
2.41	0.17	0.17	0.17	0.16	0.14	0.12	0.18	0.17	0.10
2.42	0.38	0.37	0.37	0.34	0.31	0.25	0.39	0.35	0.21
4.00	0.34	0.34	0.37	0.33	0.31	0.23	0.49	0.44	0.32
4.01	0.47	0.48	0.51	0.47	0.40	0.33	0.65	0.55	0.40
4.02	1.77	1.79	1.82	1.67	1.48	1.23	1.99	1.67	1.14
4.03	2.39	2.41	2.45	2.25	2.00	1.66	2.62	2.23	1.47
4.04	2.74	2.77	2.81	2.58	2.29	1.90	2.99	2.56	1.68
4.05	3.27	3.31	3.36	3.08	2.74	2.27	3.54	3.05	1.98
4.06	6.20	6.26	6.37	5.84	5.19	4.27	6.65	5.78	3.70
4.07	11.18	10.65	11.35	10.72	9.94	11.25	11.73	10.82	11.63
4.10	0.34	0.34	0.37	0.33	0.30	0.23	0.48	0.42	0.31
4.11	0.48	0.48	0.51	0.46	0.40	0.33	0.63	0.52	0.39
4.12	1.44	1.44	1.50	1.37	1.21	0.99	1.59	1.36	0.89
4.13	1.82	1.82	1.87	1.72	1.52	1.25	1.96	1.70	1.09
4.14	2.06	2.07	2.12	1.95	1.72	1.42	2.21	1.93	1.23
4.20	0.15	0.16	0.16	0.14	0.13	0.11	0.17	0.15	0.09
4.21	0.30	0.31	0.31	0.29	0.26	0.21	0.33	0.29	0.18
4.50	0.03	0.03	0.03	0.03	0.03	0.02	0.05	0.05	0.03
4.60	0.15	0.16	0.16	0.15	0.13	0.11	0.17	0.15	0.09
4.61	5.78	5.20	5.69	6.05	4.83	4.57	5.38	5.66	4.75
4.70	6.03	5.53	6.04	6.18	5.14	4.82	5.77	5.99	4.96
4.80	0.21	0.22	0.22	0.20	0.18	0.15	0.22	0.20	0.12
4.90	6.42	5.94	6.43	6.30	5.49	5.11	6.19	6.37	5.18
5.01	0.18	0.18	0.18	0.17	0.15	0.12	0.19	0.17	0.10
5.02	0.23	0.23	0.23	0.21	0.19	0.16	0.24	0.21	0.13
5.03	3.63	3.68	3.74	3.43	3.06	2.51	3.80	3.36	2.06
6.01	0.23	0.22	0.24	0.22	0.19	0.15	0.33	0.28	0.21
6.02	0.53	0.53	0.56	0.51	0.44	0.37	0.66	0.51	0.39
6.03	2.13	2.16	2.19	2.00	1.79	1.47	2.33	1.99	1.30
6.04	2.31	2.35	2.38	2.18	1.95	1.61	2.53	2.16	1.40
6.05	3.93	4.01	4.04	3.70	3.31	2.73	4.30	3.67	2.39
6.06	4.11	4.16	4.14	4.01	3.97	3.33	4.41	3.93	3.48
6.07	6.71	6.73	6.55	6.32	6.25	5.11	6.74	6.49	4.55
6.11	0.70	0.71	0.72	0.66	0.59	0.49	0.76	0.65	0.41
6.13	1.28	1.30	1.30	1.19	1.07	0.88	1.35	1.18	0.73
6.20	0.16	0.17	0.16	0.15	0.14	0.11	0.17	0.15	0.09
6.30	0.90	0.93	0.92	0.84	0.77	0.63	0.95	0.83	0.52
6.31	1.17	1.20	1.19	1.09	0.99	0.81	1.21	1.07	0.67
6.32	1.43	1.46	1.45	1.33	1.21	0.99	1.48	1.32	0.81
6.33	2.07	2.12	2.13	1.95	1.76	1.45	2.21	1.92	1.22
6.34	2.47	2.52	2.54	2.32	2.09	1.72	2.61	2.28	1.44
6.40	0.08	0.09	0.10	0.08	0.09	0.06	0.14	0.14	0.09
7.01	1.07	1.08	1.12	1.02	0.90	0.74	1.17	1.01	0.65
7.02	3.18	3.23	3.28	3.01	2.68	2.20	3.32	2.95	1.80
7.10	6.57	6.59	6.53	6.29	6.08	5.12	6.76	6.31	4.57
7.11	6.88	6.86	6.92	6.42	6.31	5.34	6.98	6.49	4.76
7.12	7.13	7.08	7.18	6.66	6.52	5.52	7.18	6.67	4.91
8.01	0.70	0.71	0.71	0.65	0.59	0.49	0.75	0.64	0.40
8.02	1.58	1.62	1.61	1.48	1.34	1.10	1.69	1.45	0.92
8.20	1.04	1.06	1.08	0.99	0.88	0.72	1.07	0.96	0.57
8.70	0.46	0.46	0.48	0.44	0.39	0.32	0.49	0.43	0.27
8.71	0.72	0.72	0.75	0.66	0.60	0.50	0.80	0.68	0.44
3a	0.29	0.29	0.31	0.28	0.24	0.20	0.38	0.32	0.23
3B.1	0.30	0.31	0.32	0.29	0.26	0.21	0.33	0.29	0.19
3B.2	0.75	0.75	0.79	0.72	0.63	0.52	0.86	0.72	0.50
NC1	0.69	0.70	0.70	0.64	0.57	0.48	0.69	0.62	0.37
NC2	1.27	1.29	1.30	1.19	1.07	0.89	1.30	1.16	0.70
SC	0.79	0.80	0.81	0.74	0.67	0.55	0.79	0.73	0.42
South	10.71	10.52	10.92	10.09	9.53	8.02	10.85	9.73	6.97

Post-Developed Catchment 3 month ARI

Node	Duration (minutes)							
	15	20	25	30	45	60	90	120
1.01	0.30	0.30	0.30	0.28	0.25	0.26	0.28	0.26
1.02	0.35	0.36	0.35	0.32	0.29	0.31	0.32	0.31
2.01	0.10	0.10	0.10	0.09	0.08	0.08	0.09	0.09
2.02	0.90	0.90	0.91	0.84	0.75	0.79	0.83	0.79
2.03	1.00	1.01	1.02	0.94	0.84	0.88	0.93	0.89
2.04	1.20	1.20	1.21	1.12	1.00	1.06	1.12	1.06
2.05	1.53	1.53	1.54	1.43	1.28	1.35	1.42	1.35
2.06	1.75	1.75	1.76	1.63	1.46	1.54	1.63	1.54
2.07	2.59	2.32	3.13	3.18	1.84	2.22	2.79	2.18
2.08	3.04	2.86	3.27	3.25	2.24	2.75	3.05	2.70
2.10	0.08	0.09	0.08	0.08	0.07	0.07	0.08	0.07
2.11	0.58	0.57	0.58	0.54	0.48	0.51	0.54	0.51
2.12	0.62	0.62	0.63	0.58	0.52	0.55	0.58	0.55
2.41	0.07	0.08	0.07	0.07	0.06	0.07	0.07	0.07
2.42	0.15	0.17	0.16	0.14	0.13	0.14	0.15	0.14
4.00	0.14	0.15	0.15	0.14	0.12	0.13	0.14	0.13
4.01	0.20	0.21	0.21	0.19	0.17	0.18	0.19	0.18
4.02	0.75	0.78	0.76	0.70	0.63	0.67	0.71	0.68
4.03	1.01	1.05	1.03	0.95	0.85	0.90	0.95	0.91
4.04	1.16	1.20	1.18	1.09	0.97	1.04	1.10	1.05
4.05	1.38	1.41	1.40	1.30	1.16	1.23	1.30	1.24
4.06	2.62	2.65	2.66	2.46	2.21	2.32	2.45	2.33
4.07	7.23	7.13	7.67	7.29	5.82	7.09	6.47	6.67
4.10	0.14	0.15	0.15	0.14	0.12	0.13	0.14	0.13
4.11	0.20	0.21	0.21	0.19	0.17	0.18	0.19	0.18
4.12	0.61	0.62	0.62	0.58	0.52	0.54	0.57	0.55
4.13	0.77	0.78	0.76	0.72	0.65	0.68	0.72	0.69
4.14	0.87	0.88	0.89	0.82	0.73	0.78	0.82	0.78
4.20	0.06	0.07	0.07	0.06	0.05	0.06	0.06	0.06
4.21	0.13	0.13	0.13	0.12	0.11	0.12	0.12	0.12
4.50	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
4.60	0.06	0.07	0.07	0.06	0.06	0.06	0.06	0.06
4.61	3.21	3.03	3.44	3.40	2.34	2.90	3.21	2.85
4.70	3.37	3.18	3.60	3.55	2.44	3.04	3.36	2.99
4.80	0.09	0.10	0.09	0.08	0.08	0.08	0.09	0.08
4.90	3.54	3.36	3.77	3.71	2.56	3.20	3.52	3.15
5.01	0.07	0.08	0.08	0.07	0.06	0.07	0.07	0.07
5.02	0.10	0.10	0.10	0.09	0.08	0.08	0.09	0.09
5.03	1.55	1.56	1.57	1.45	1.30	1.37	1.45	1.37
6.01	0.10	0.10	0.10	0.09	0.08	0.08	0.09	0.09
6.02	0.23	0.23	0.23	0.21	0.19	0.20	0.21	0.20
6.03	0.90	0.94	0.92	0.85	0.76	0.80	0.85	0.81
6.04	0.98	1.02	1.00	0.92	0.83	0.87	0.93	0.88
6.05	1.67	1.73	1.69	1.56	1.40	1.49	1.58	1.48
6.06	2.75	2.59	2.73	2.58	2.61	2.57	2.62	2.53
6.07	3.66	3.63	3.63	3.53	3.43	3.48	3.56	3.45
6.11	0.30	0.32	0.30	0.28	0.25	0.27	0.28	0.27
6.13	0.54	0.57	0.55	0.51	0.46	0.48	0.51	0.49
6.20	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06
6.30	0.39	0.40	0.39	0.36	0.32	0.34	0.36	0.35
6.31	0.50	0.52	0.50	0.46	0.42	0.44	0.47	0.44
6.32	0.61	0.64	0.61	0.57	0.51	0.54	0.57	0.54
6.33	0.88	0.93	0.90	0.83	0.74	0.79	0.83	0.80
6.34	1.05	1.11	1.07	0.98	0.88	0.94	0.99	0.95
6.40	0.03	0.04	0.04	0.03	0.03	0.03	0.03	0.03
7.01	0.46	0.46	0.46	0.43	0.38	0.41	0.43	0.41
7.02	1.35	1.37	1.37	1.27	1.14	1.20	1.27	1.21
7.10	3.66	3.63	3.64	3.53	3.43	3.48	3.56	3.46
7.11	3.80	3.78	3.78	3.66	3.55	3.61	3.70	3.58
7.12	3.91	3.89	3.89	3.78	3.64	3.71	3.80	3.67
8.01	0.30	0.32	0.30	0.28	0.25	0.26	0.28	0.27
8.02	0.68	0.71	0.68	0.63	0.56	0.60	0.63	0.60
8.20	0.45	0.45	0.45	0.42	0.37	0.40	0.42	0.40
8.70	0.19	0.21	0.20	0.18	0.17	0.18	0.19	0.18
8.71	0.30	0.32	0.31	0.28	0.26	0.27	0.29	0.28
3a	0.12	0.12	0.12	0.11	0.10	0.11	0.12	0.11
3B.1	0.13	0.13	0.13	0.12	0.11	0.12	0.12	0.12
3B.2	0.32	0.33	0.32	0.30	0.27	0.28	0.30	0.29
NC1	0.29	0.30	0.29	0.27	0.24	0.25	0.27	0.26
NC2	0.54	0.56	0.55	0.50	0.45	0.48	0.51	0.49
SC	0.34	0.35	0.35	0.32	0.29	0.30	0.32	0.30
South	5.46	5.39	5.46	5.21	4.93	5.05	5.22	5.04

Post-Developed Catchment

PMF

Node	Duration (minutes)								
	15	30	45	60	90	120	150	180	240
1.01	7.3	6.0	5.2	4.6	3.7	3.1	2.7	2.4	2.0
1.02	8.9	7.3	6.1	5.7	4.4	3.7	3.2	2.8	2.3
2.01	5.0	4.2	3.5	3.1	2.4	2.1	1.8	1.6	1.4
2.02	25.4	20.8	17.7	15.8	12.6	10.7	9.2	8.3	6.8
2.03	28.3	23.2	19.5	17.7	14.0	11.8	10.2	9.1	7.6
2.04	33.3	27.2	23.0	20.5	16.4	13.9	12.0	10.6	8.9
2.05	42.5	33.8	28.7	25.6	20.4	17.4	14.9	13.3	11.0
2.06	48.3	38.3	32.5	28.9	23.2	19.7	16.9	15.1	12.6
2.07	51.4	41.7	35.5	31.2	24.8	21.1	18.3	16.4	13.7
2.08	66.5	54.2	46.1	40.5	32.0	27.3	23.8	21.3	17.7
2.10	2.3	1.8	1.5	1.4	1.0	0.9	0.7	0.7	0.5
2.11	15.1	12.1	10.3	9.4	7.3	6.2	5.3	4.8	3.9
2.12	16.2	12.8	11.0	10.0	7.9	6.6	5.7	5.1	4.2
2.41	2.0	1.6	1.4	1.2	0.9	0.8	0.6	0.6	0.5
2.42	4.3	3.4	2.9	2.6	2.0	1.7	1.4	1.3	1.0
4.00	7.9	6.5	5.4	4.8	3.8	3.2	2.8	2.5	2.1
4.01	9.5	7.7	6.4	5.7	4.5	3.9	3.3	3.0	2.5
4.02	23.8	19.4	16.1	14.7	11.5	9.8	8.4	7.5	6.2
4.03	31.1	24.9	21.1	19.3	14.9	12.6	10.8	9.6	8.0
4.04	34.7	28.0	23.5	21.6	16.8	14.1	12.2	10.9	9.0
4.05	41.3	33.6	27.8	25.8	20.0	16.7	14.5	12.8	10.7
4.06	76.8	63.1	52.5	48.0	37.7	31.7	27.3	24.4	20.3
4.07	150.2	126.5	109.7	96.5	74.1	63.4	55.6	50.3	42.2
4.10	7.7	6.4	5.4	4.7	3.7	3.2	2.8	2.5	2.1
4.11	9.1	7.6	6.4	5.6	4.5	3.8	3.3	3.0	2.4
4.12	19.4	16.3	13.6	12.0	9.6	8.2	7.1	6.3	5.2
4.13	23.4	19.6	16.4	14.6	11.7	9.9	8.5	7.6	6.3
4.14	28.1	21.7	18.3	16.4	12.9	11.0	9.5	8.5	7.0
4.20	1.9	1.4	1.2	1.1	0.8	0.7	0.6	0.5	0.4
4.21	3.6	2.9	2.5	2.2	1.7	1.4	1.2	1.1	0.9
4.50	1.0	0.8	0.7	0.6	0.5	0.4	0.3	0.3	0.3
4.60	1.9	1.5	1.3	1.1	0.9	0.7	0.6	0.5	0.4
4.61	70.9	57.7	48.9	43.1	33.9	29.1	25.3	22.7	18.9
4.70	75.0	61.2	51.7	45.6	35.9	30.7	26.7	24.0	20.0
4.80	2.5	2.0	1.7	1.5	1.2	1.0	0.8	0.7	0.6
4.90	79.8	64.7	54.8	48.3	38.1	32.4	28.2	25.4	21.2
5.01	2.2	1.7	1.4	1.3	1.0	0.8	0.7	0.6	0.5
5.02	2.7	2.2	1.8	1.6	1.2	1.0	0.9	0.8	0.6
5.03	42.9	33.8	28.8	26.8	20.5	17.3	14.8	13.2	10.9
6.01	4.7	3.7	3.1	2.8	2.2	1.9	1.6	1.4	1.2
6.02	8.1	6.5	5.4	4.9	3.9	3.3	2.8	2.5	2.1
6.03	26.6	20.9	17.8	16.5	12.6	10.6	9.1	8.1	6.7
6.04	28.5	22.6	19.2	17.7	13.7	11.4	9.8	8.8	7.2
6.05	49.0	38.7	33.0	30.1	23.3	19.6	16.8	15.0	12.4
6.06	51.9	41.4	34.4	31.2	24.6	20.7	17.9	16.0	13.3
6.07	82.8	66.5	56.4	50.7	39.8	33.4	28.7	25.6	21.3
6.11	8.3	6.6	5.7	5.1	3.8	3.2	2.8	2.4	2.0
6.13	14.9	11.7	10.0	9.2	7.0	5.9	5.0	4.5	3.7
6.20	1.9	1.5	1.3	1.2	0.9	0.7	0.6	0.6	0.5
6.30	10.5	8.3	7.2	6.4	4.9	4.2	3.5	3.2	2.6
6.31	13.7	10.7	9.2	8.5	6.4	5.4	4.6	4.1	3.4
6.32	16.5	13.0	11.0	10.4	7.9	6.5	5.6	5.0	4.1
6.33	25.1	19.9	16.9	15.3	12.1	10.0	8.5	7.6	6.3
6.34	29.9	23.5	19.9	18.0	14.2	11.8	10.1	9.0	7.5
6.40	2.2	1.7	1.4	1.3	1.0	0.9	0.7	0.7	0.5
7.01	13.7	10.8	9.2	8.6	6.5	5.5	4.7	4.2	3.5
7.02	37.6	29.8	25.2	23.4	18.0	15.2	13.0	11.6	9.6
7.10	83.5	66.8	55.8	50.8	39.8	33.5	28.8	25.6	21.3
7.11	86.6	69.4	58.1	52.7	41.6	35.0	30.0	26.8	22.2
7.12	88.8	71.5	59.9	54.3	42.9	36.2	31.0	27.7	23.0
8.01	8.3	6.6	5.6	5.1	3.8	3.2	2.7	2.4	2.0
8.02	19.0	14.9	12.6	11.7	9.0	7.5	6.4	5.8	4.7
8.20	11.8	9.5	8.1	7.4	5.7	4.8	4.1	3.7	3.0
8.70	3.6	4.4	3.8	3.4	2.5	2.1	1.8	1.6	1.3
8.71	9.3	7.2	6.2	5.6	4.3	3.6	3.1	2.7	2.2
3a	6.6	5.9	5.1	4.5	3.5	2.9	2.6	2.3	2.0
3B.1	5.2	5.1	4.7	4.2	3.3	2.7	2.3	2.1	1.8
3B.2	13.6	13.0	11.7	10.4	8.0	6.6	5.7	5.2	4.5
NC1	7.8	6.2	5.4	4.9	3.7	3.1	2.7	2.4	2.0
NC2	14.6	11.6	10.0	9.0	6.9	5.8	5.0	4.4	3.7
SC	8.7	7.2	6.0	5.6	4.3	3.7	3.1	2.8	2.3
South	130.7	105.2	88.0	79.0	62.9	53.3	45.8	40.9	33.8

APPENDIX D: BASIX OUTPUT & FIGURE

Project Report

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Description of project

Project address and type

Project name	Sample Project
Street number	111
Street name and type	basix Place
Suburb	Minto
Post code	2566
Local government area	Cambelltown City Council
Deposited Plan number	333
Strata Plan number	
Lot number	3
Section	
Project type	Detached dwelling
Nature of project	Erecting a new residential building

Project details

Site area	450	m ²
Gross floor area	265	m ²
Roof area	236	m ²
Number of bedrooms	4	
Total area of vegetation (garden and lawn)	130	m ²
Concession claimed (if applicable)	not applicable	

Commitments

Commitments	DA plans	CDC/CC plans & specifications	Certifier check
LANDSCAPE			
Landscaping			
The applicant must plant at least 40 square metres of indigenous vegetation on the site. Vegetation is indigenous if it is listed in the BASIX Specification as indigenous to the local government area in which the development is to be constructed.	✓	✓	
STORMWATER			
Collection of rainwater and stormwater			
The applicant must install a rainwater tank on the site. This rainwater tank must meet, and be installed in accordance with, the requirements of all applicable regulatory authorities.	✓	✓	✓
Rainwater tank			

RAINFALL TANKS

The applicant must configure the rainwater tank to collect rain runoff from at least 124 square metres of the roof area of the dwelling.	✓	✓	✓
The applicant must connect the rainwater tank to all the toilets in the development, so that rainwater can be used for toilet flushing.	✓	✓	✓
The applicant must connect the rainwater tank to the cold water tap that supplies each clothes washing machine in the development, so that rainwater can be used for clothes washing.	✓	✓	✓
The applicant must connect the rainwater tank to at least one outdoor tap in the development so that rainwater can be used to irrigate vegetated areas of the site.	✓	✓	✓
The rainwater tank must have a capacity of at least 2000 litres.	✓	✓	✓

WATER**Showerheads**

The applicant must install showerheads with a minimum rating of 3A in all showers in the development.	✓	✓	✓
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Toilets

The applicant must install a toilet flushing system with a minimum rating of 2A in each toilet in the development.	✓	✓	✓
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Tap fittings

The applicant must install taps with a minimum flow rate of 3A in the kitchen in the development.	✓		
The applicant must install bathroom taps (other than showerheads) with a minimum flow rate of 3A in each bathroom in the development.	✓		

THERMAL COMFORT - Deemed to Comply**General**

The applicant must construct the dwelling so that it is not significantly overshadowed.	✓	✓	✓
The applicant must construct the dwelling so that the total skylight area of the dwelling is less than 2% of its gross floor area.	✓	✓	✓

Construction

The applicant must construct the dwelling in accordance with the following specifications:			
• Ground floor(s): 143 square metres of concrete slab on ground floors	✓	✓	✓
• External walls: 170 square metres of brick veneer and 100 square metres of timber, weatherboard or cement sheet	✓	✓	✓
• Walls shared with garage: 25 square metres of plasterboard	✓	✓	✓
• Ceilings: 180 square metres of ceiling area with roofspace over it.	✓	✓	✓
• Roof space: a large roofspace	✓	✓	✓
The areas referred to above are the maximum permitted and must be calculated in accordance with the BASIX Specification.			

Glazing and shading

The applicant must install the glazing and shading set out below:			
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· North sector: 20 square metres of clear, single glass, shaded by 600-1100 mm eave/projection	✓	✓	✓
· East sector: 10 square metres of clear, single glass, shaded by vertical adjustable/fixed shading	✓	✓	✓
· South sector: 10 square metres of clear, single glass	✓	✓	✓
· West sector: 10 square metres of clear, single glass, shaded by min 1800 mm eave/projection	✓	✓	✓
The areas specified above for glazing are the maximums permitted.			
Note: 5% of total glazing in the development is exempt from the shading requirements referred to above.			
The glazing and shading referred to in this commitment must meet the requirements set out in the BASIX Specification.	✓	✓	✓
The applicant must construct the dwelling so that a minimum of 50% of the glazing has aluminium frames.	✓	✓	✓

Required insulation and roof colours

The applicant must construct the dwelling in accordance with the following insulation requirements:			
· External walls: insulation with an R-value of R1.5 must be added to the brick veneer walls or, alternatively, these walls must have an R-value of R1.7. Insulation is not required in walls adjacent to a garage or the external walls of a garage.		✓	✓
· External walls: insulation with an R-value of R1.5 must be added to the timber, weatherboard or cement sheet walls or, alternatively, these walls must have an R-value of R1.7. Insulation is not required in walls adjacent to a garage or the external walls of a garage.		✓	✓
· Ceilings: insulation with an R-value of R3.0 must be added to each ceiling which has a roofspace over it, except ceilings directly above a garage. (If a roof is insulated with a foil-backed blanket, then the R-value of the insulation to be added to the ceiling under that roof may be reduced by R0.5).		✓	✓
The applicant must construct the dwelling so that all roofs are light coloured, as defined in the BASIX Specification.		✓	✓
The applicant must install the following roof ventilation system in the dwelling: wind-driven ventilator. This system must comply with the BASIX Specification.		✓	✓

Energy

Active cooling			
The applicant must install a three phase a/c system - (EER between 3.0 - 3.5), or one with a higher EER, for living areas of the dwelling.		✓	✓
The applicant must install a three phase a/c system - (EER between 3.0 - 3.5), or one with a higher EER, for the bedrooms of the dwelling.		✓	✓
Active heating			
The applicant must install a three phase a/c system - (EER between 3.0 - 3.5), or one with a higher EER, for living areas of the dwelling.		✓	✓
The applicant must install a three phase a/c system - (EER between 3.0 - 3.5), or one with a higher EER, for the bedrooms of the dwelling.		✓	✓

Hot water

The applicant must install the following hot water system in the development: gas storage - 5 Star (or one with a higher Star rating).	✓	✓	✓
Lighting			
The applicant must install standard or compact fluorescent lighting as the primary type of artificial light in each of the following rooms:			
- the kitchen		✓	✓
- the garage		✓	✓
- the laundry		✓	✓
The applicant must install a window & skylight in the kitchen of the dwelling for natural lighting.	✓	✓	✓
The applicant must install a window in each bathroom and toilet in the development for natural lighting.	✓	✓	✓
Cooking			
The applicant must install a gas cooktop & electric oven in the kitchen of the dwelling.		✓	
Design enhancements			
The applicant must construct each refrigerator space in the development so that it is well ventilated, as defined in the BASIX Specification.		✓	
The applicant must install a fixed outdoor clothes drying line as part of the development.		✓	
END BASIX COMMITMENTS			


1. In these commitments, "applicant" means the person carrying out the development.
2. Commitments identified with a ✓ in the "DA plans" column must be shown on the plans accompanying the development application for the proposed development.
3. Commitments identified with a ✓ in the "CC/CDC plans and specs" column must be shown in the plans and specifications accompanying the application for a construction certificate / complying development certificate for the proposed development.
4. Commitments identified with a ✓ in the "OC" column must be certified by a certifying authority as having been fulfilled, before a final occupation certificate for the development may be issued.

BASIX Report

The following scores have been achieved for this development:

Water 40 % 

Thermal PASS

Energy 27 % 

	Score	Appliance score	Total
Water	40	9.4	49
Energy	27	0.0	27

These scores are based on the following commitments relating to appliances:

Appliance Selections**Clothes washer**

The applicant must install a clothes washer with a minimum water efficiency rating of 4A in the dwelling.

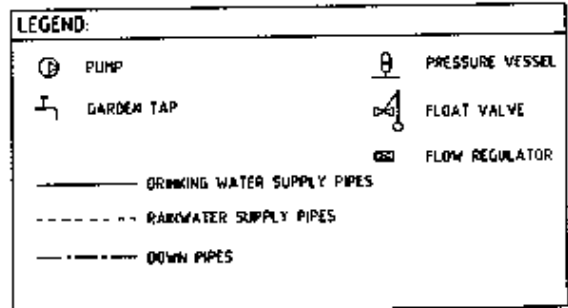
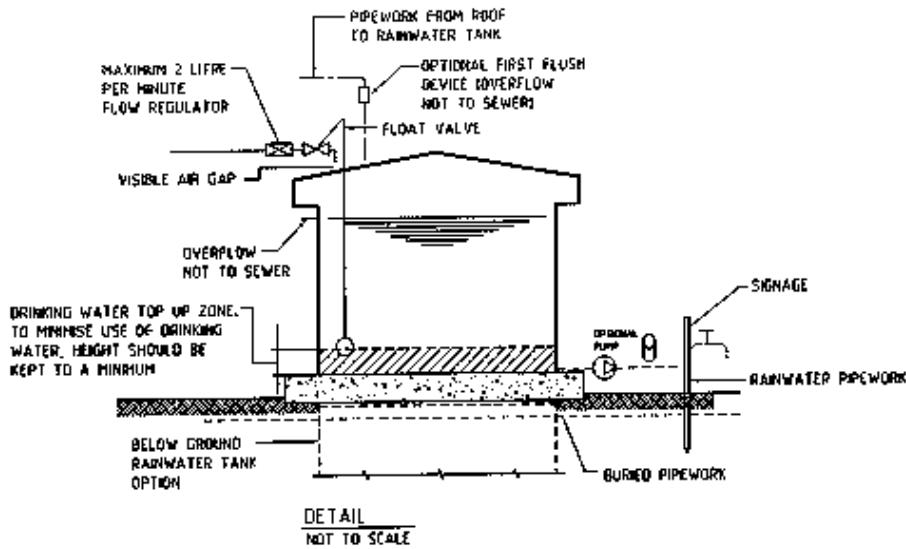
Dishwasher

The applicant must install a dishwasher with a minimum water efficiency rating of 3A in the dwelling.

END APPLIANCE SELECTIONS

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RAINWATER TANK WITH DRINKING WATER TOP UP - SINGLE RESIDENTIAL



Plumbing for above ground rainwater tanks with a direct inter-connection to the drinking water supply & providing rainwater to the garden, washing machine & toilet only

