Looking north at the approximate location of proposed road crossing (culvert)

Looking south from the northern end of the site

Looking north at existing water course

Looking south at existing water course at one pond area. Also approximate location of pedestrian/cycleway crossing.

Looking south from the northern end of site at eastern ridge line to left.

Existing piped drainage outlet from catchment B to western side of site. Note large scour hole that has appeared. This would be remediated as part of the works.

Existing catchment B piped drainage outlet. This outlet would be retained and upgraded with placed rock scour protection.

APPENDIX B
SUBCATCHMENT DELINEATION

SCALE: APPROXIMATELY 1:3500

COASTAL GROVE
SUB CATCHMENT DELINEATION

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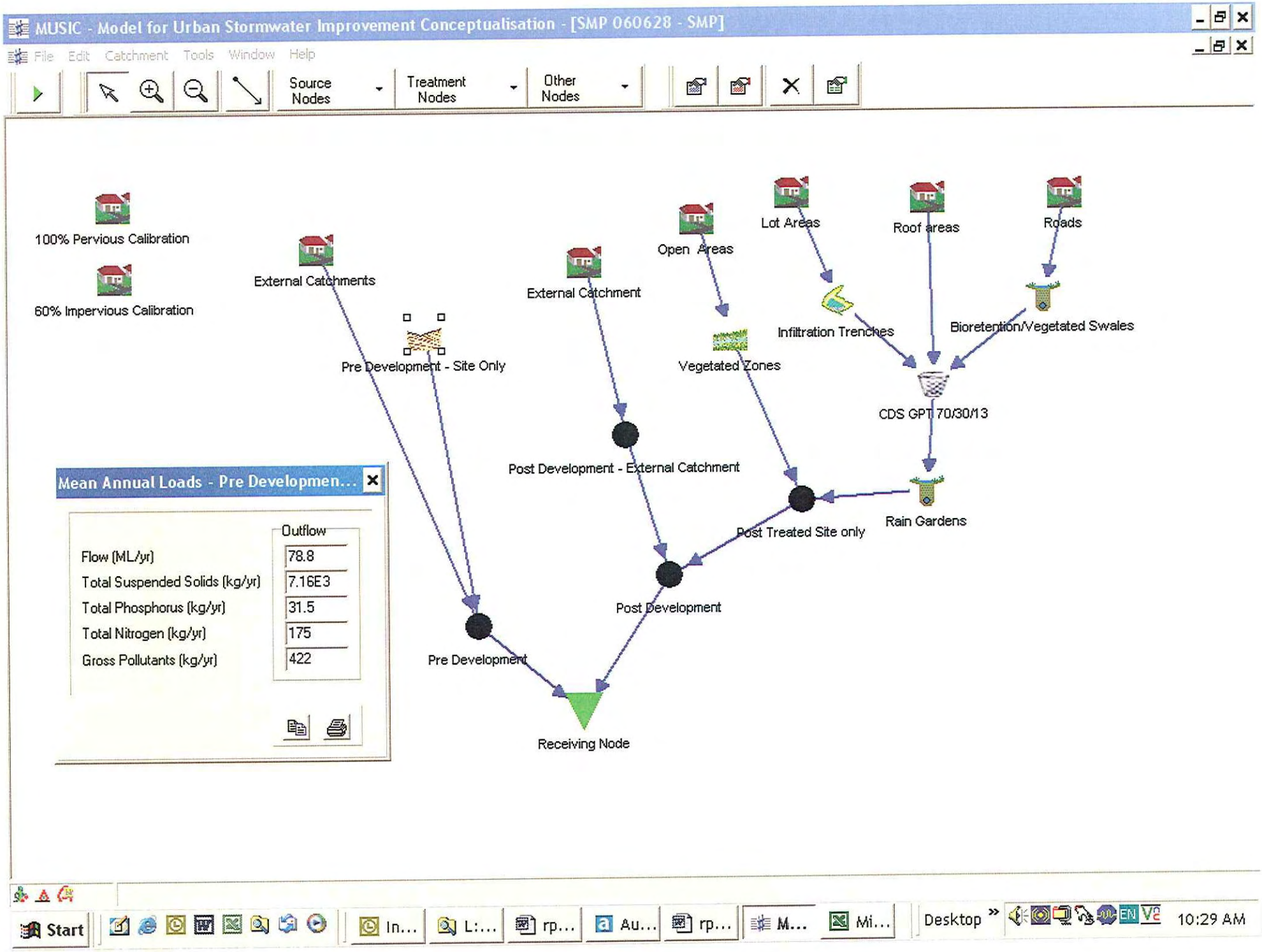
Existing Conditions

Catchment Name	Total Area	Impervious %	Imp Area	Perv Area	Ave Slope	Imp n	Per n
A	4.25	60%	2.55	1.70	12%	0.015	0.035
B	3.34	60%	2.00	1.34	7%	0.015	0.035
C	10.37	60%	6.22	4.15	12%	0.015	0.035
D	10.26	10%	1.03	9.23	11%	0.015	0.035
E	0.08	0%	0.00	0.08	3%	0.015	0.035
S1	0.51	5%	0.03	0.48	13%	0.015	0.04
S2	5.16	10%	0.52	4.64	17%	0.015	0.04
S3	6.73	0%	0.00	6.73	13%	0.015	0.04
TOTAL	40.7		0.00	40.70			

Proposed Conditions

Catchment Name	Total Area	Impervious %	Imp Area	Perv Area	Ave Slope	Imp n	Per n
A	4.25	60%	2.55	1.70	12%	0.015	0.035
B	3.34	60%	2.00	1.34	7%	0.015	0.035
C	10.37	60%	6.22	4.15	12%	0.015	0.035
D	10.26	10%	1.03	9.23	11%	0.015	0.035
E	0.08	0%	0.00	0.08	3%	0.015	0.035
S1	0.51	50%	0.26	0.26	13%	0.015	0.04
S2	5.16	40%	2.06	3.10	17%	0.015	0.04
S3	6.73	40%	2.69	4.04	13%	0.015	0.04
TOTAL	40.7		16.8	23.9			
			% Imp of site =		40%		

APPENDIX C
WATER QUALITY MODELLING OUTPUT



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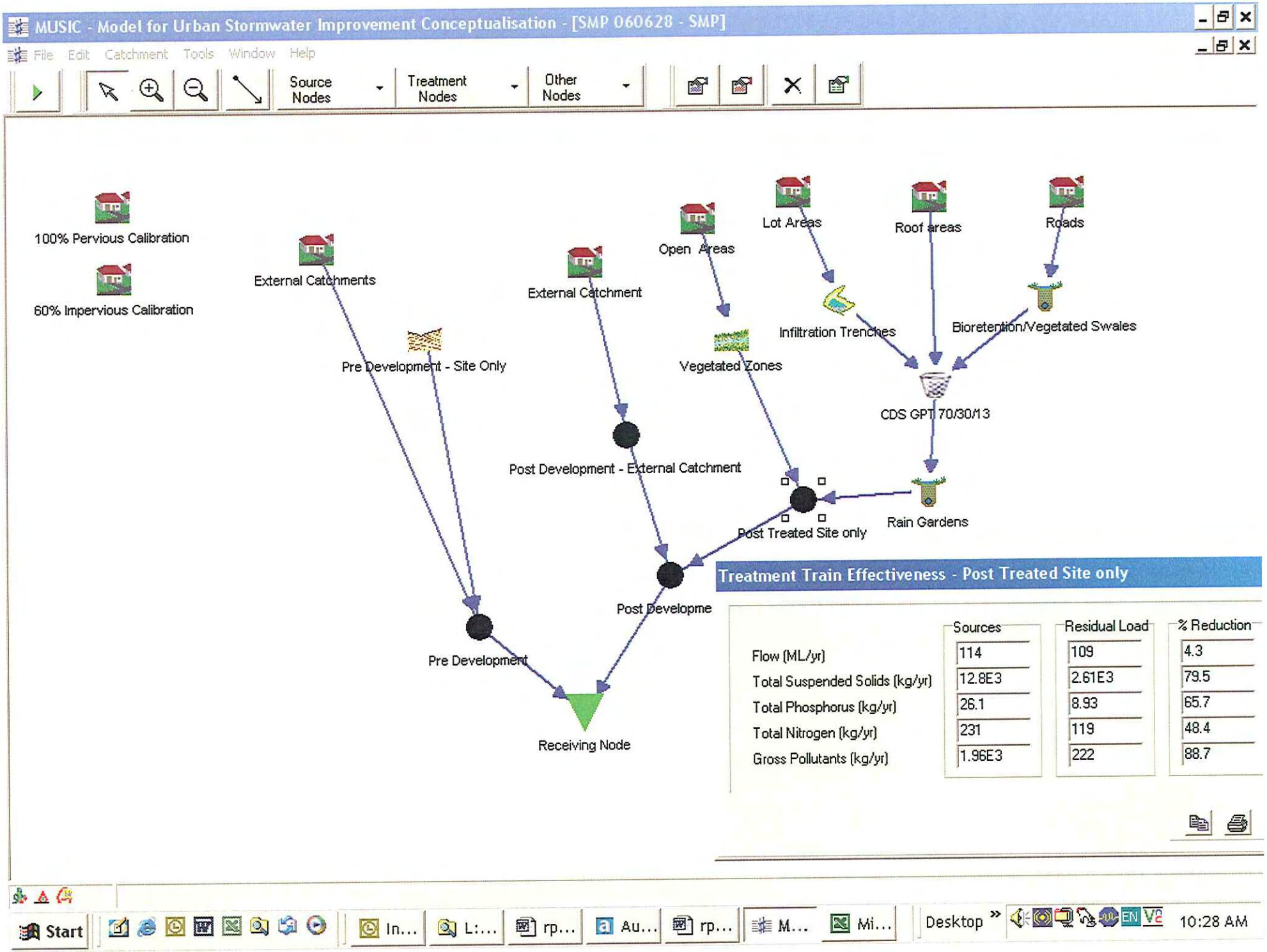

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APPENDIX D
HYDROLOGIC MODELLING OUTPUT