

MUSIC-link Report

Project Details		Company Details	
Project:	15-17 Garswood Rd, Glenmore Park	Company:	Rammy Associates Pty Ltd
Report Export Date:	16/09/2020	Contact:	Rammy
Catchment Name:	15013 - 15-17 Garswood Rd	Address:	[REDACTED]
Catchment Area:	0.908ha	Phone:	[REDACTED]
Impervious Area*:	52.20%	Email:	[REDACTED]
Rainfall Station:	67113 PENRITH		
Modelling Time-step:	6 Minutes		
Modelling Period:	1/01/1999 - 31/12/2008 11:54:00 PM		
Mean Annual Rainfall:	691mm		
Evapotranspiration:	1158mm		
MUSIC Version:	6.3.0		
MUSIC-link data Version:	6.33		
Study Area:	Penrith		
Scenario:	Penrith Development		

* takes into account area from all source nodes that link to the chosen reporting node, excluding Import Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node: Receiving Node	Reduction	Node Type	Number	Node Type	Number
Flow	9.1%	Sedimentation Basin Node	1	Urban Source Node	10
TSS	85.1%	Rain Water Tank Node	1		
TP	74.1%	Buffer Node	2		
TN	52.3%	Swale Node	1		
GP	95.8%	GPT Node	2		
		Generic Node	1		

Comments

- The 'SF Chamber' node has been modified to represent the below ground filtration chamber. Default 'K' values have been manually adjusted to 1 in order to eliminate any performance from the actual tank, which would already be accounted for in the Filter Generic Node Target Elements. Not doing this would represent a duplication of the chamber attenuation effect. (For any questions, please Contact Ocean Protect on 1300 354 722).

Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
GPT	1 x OceanGuard200um	Hi-flow bypass rate (cum/sec)	None	99	0.02
GPT	2 x OceanGuard200um	Hi-flow bypass rate (cum/sec)	None	99	0.04
Rain	30kL	% Reuse Demand Met	80	None	81.04
Receiving	Receiving Node	% Load Reduction	None	None	9.1
Receiving	Receiving Node	GP % Load Reduction	90	None	95.8
Receiving	Receiving Node	TN % Load Reduction	45	None	52.3
Receiving	Receiving Node	TP % Load Reduction	60	None	74.1
Receiving	Receiving Node	TSS % Load Reduction	85	None	85.1
Sedimentation	SF Chamber 20m	High Flow Bypass Out (ML/yr)	None	None	0
Swale	Swale Approx. 50m	Bed slope	0.01	0.05	0.01
Urban	Driveway - 170m (100% Imp.)	Area Impervious (ha)	None	None	0.017
Urban	Driveway - 170m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Driveway - 170m (100% Imp.)	Total Area (ha)	None	None	0.017
Urban	Driveway - 460m (100% Imp.)	Area Impervious (ha)	None	None	0.046
Urban	Driveway - 460m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Driveway - 460m (100% Imp.)	Total Area (ha)	None	None	0.046
Urban	Driveway Carpark - 830m (100% Imp.)	Area Impervious (ha)	None	None	0.083
Urban	Driveway Carpark - 830m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Driveway Carpark - 830m (100% Imp.)	Total Area (ha)	None	None	0.083
Urban	Footpath - 30m (100% Imp.)	Area Impervious (ha)	None	None	0.003
Urban	Footpath - 30m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Footpath - 30m (100% Imp.)	Total Area (ha)	None	None	0.003
Urban	Landscape - 1010m (100% Perv.)	Area Impervious (ha)	None	None	0
Urban	Landscape - 1010m (100% Perv.)	Area Pervious (ha)	None	None	0.101
Urban	Landscape - 1010m (100% Perv.)	Total Area (ha)	None	None	0.101
Urban	Landscape - 3330m (100% Perv.)	Area Impervious (ha)	None	None	0
Urban	Landscape - 3330m (100% Perv.)	Area Pervious (ha)	None	None	0.333
Urban	Landscape - 3330m (100% Perv.)	Total Area (ha)	None	None	0.333
Urban	Paved - 340m (100% Imp.)	Area Impervious (ha)	None	None	0.034
Urban	Paved - 340m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Paved - 340m (100% Imp.)	Total Area (ha)	None	None	0.034
Urban	Play area - 1410m (100% Imp.)	Area Impervious (ha)	None	None	0.141
Urban	Play area - 1410m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Play area - 1410m (100% Imp.)	Total Area (ha)	None	None	0.141
Urban	Roof - 60m (100% Imp.)	Area Impervious (ha)	None	None	0.006
Urban	Roof - 60m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Roof - 60m (100% Imp.)	Total Area (ha)	None	None	0.006
Urban	Roof to RWT - 1440m (100% Imp.)	Area Impervious (ha)	None	None	0.144
Urban	Roof to RWT - 1440m (100% Imp.)	Area Pervious (ha)	None	None	0
Urban	Roof to RWT - 1440m (100% Imp.)	Total Area (ha)	None	None	0.144

Only certain parameters are reported when they pass validation

NOTE: A successful self-validation check of your model does not constitute an approved model by Penrith City Council
MUSIC-link now in MUSIC by eWater – leading software for modelling stormwater solutions

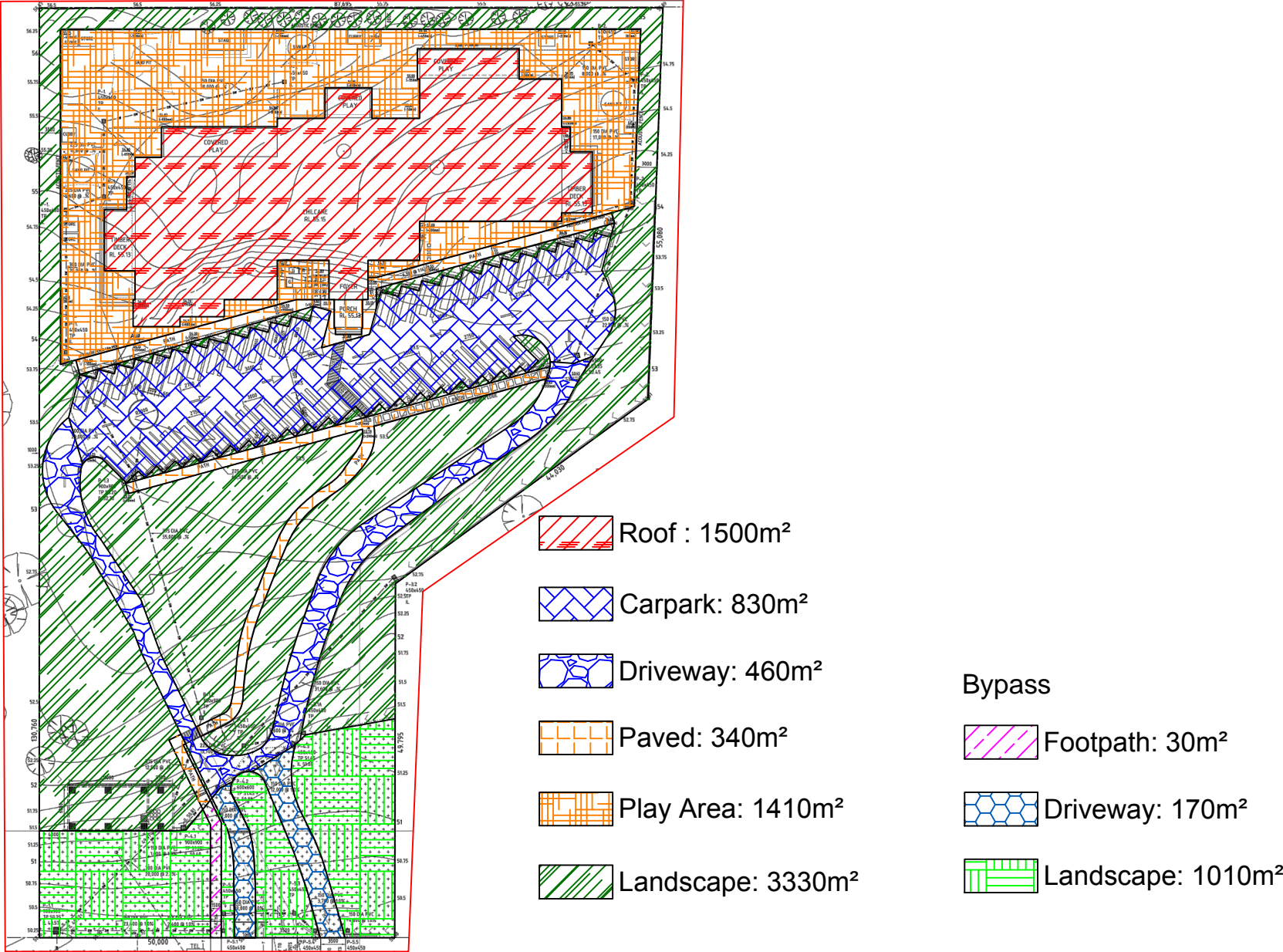
Failing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Sedimentation	SF Chamber 20m	Notional Detention Time (hrs)	8	12	0.338
Sedimentation	SF Chamber 20m	Total Nitrogen - k (m/yr)	500	500	1
Sedimentation	SF Chamber 20m	Total Phosphorus - k (m/yr)	6000	6000	1
Sedimentation	SF Chamber 20m	Total Suspended Solids - k (m/yr)	8000	8000	1

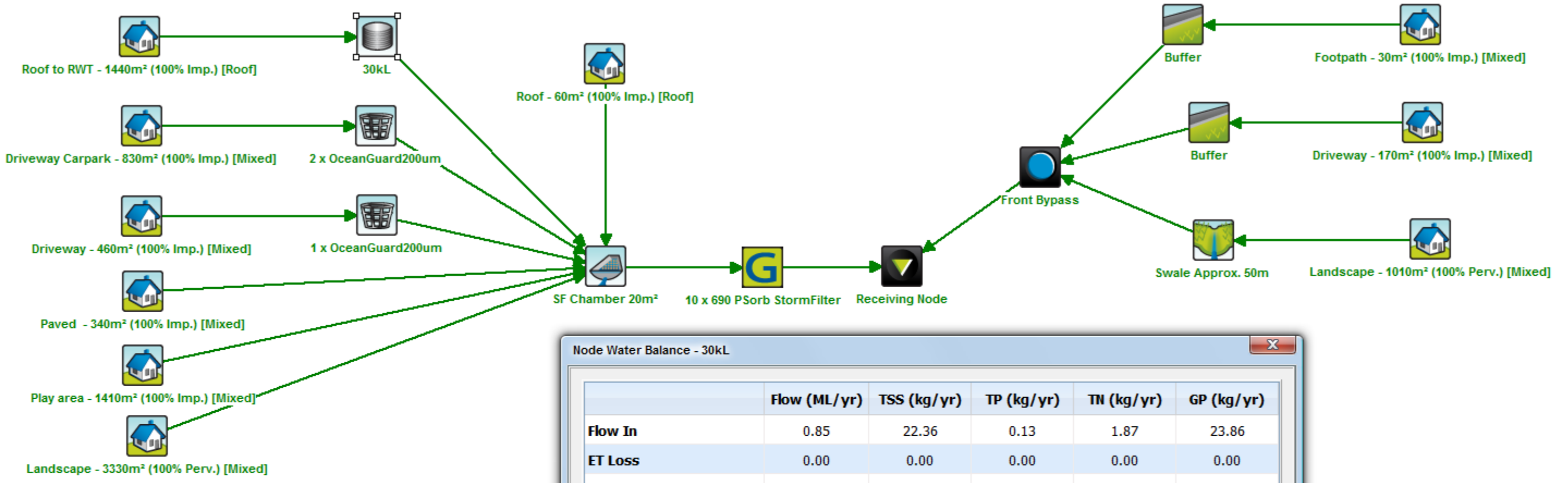
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MUSIC Model Site Area Breakup



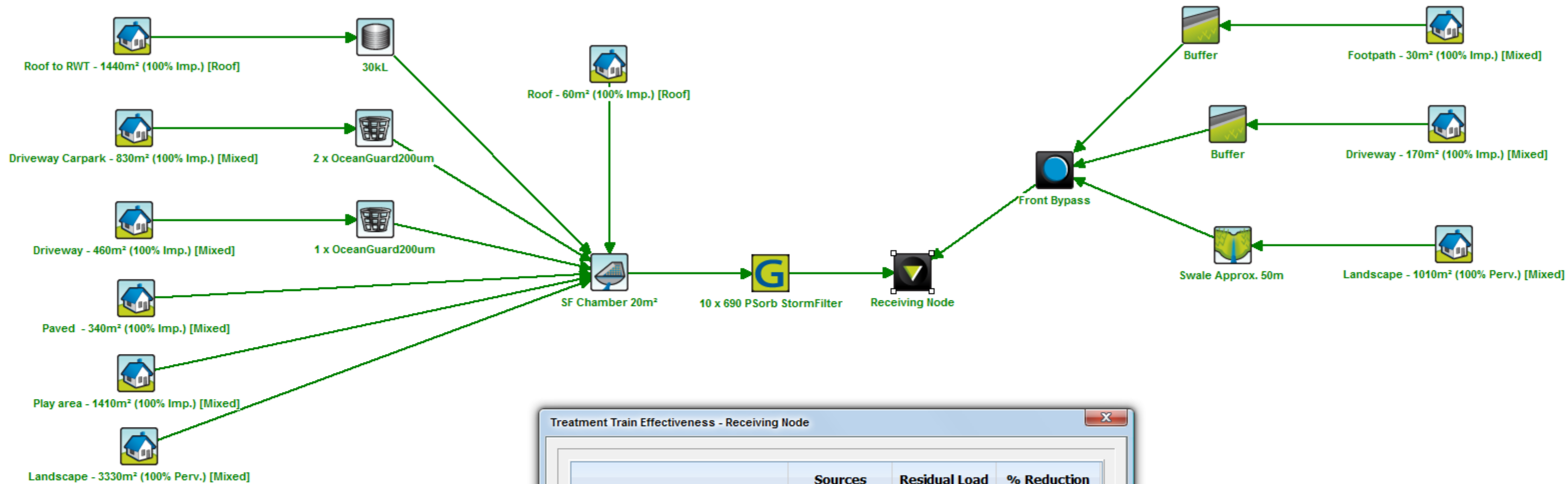
15013 - 15-17 Garswood Rd, Glenmore Park (Rev4 - Site Area Breakup)



Node Water Balance - 30kL

	Flow (ML/yr)	TSS (kg/yr)	TP (kg/yr)	TN (kg/yr)	GP (kg/yr)
Flow In	0.85	22.36	0.13	1.87	23.86
ET Loss	0.00	0.00	0.00	0.00	0.00
Infiltration Loss	0.00	0.00	0.00	0.00	0.00
Low Flow Bypass Out	0.00	0.00	0.00	0.00	0.00
High Flow Bypass Out	0.00	0.00	0.00	0.00	0.00
Pipe Out	0.56	11.15	0.08	1.16	0.00
Weir Out	0.00	0.01	0.00	0.00	0.00
Transfer Function Out	0.00	0.00	0.00	0.00	0.00
Reuse Supplied	0.30	3.86	0.04	0.52	0.00
Reuse Requested	0.36	0.00	0.00	0.00	0.00
% Reuse Demand Met	81.04	0.00	0.00	0.00	0.00
% Load Reduction	34.50	50.09	38.60	38.00	100.00

Decimal Places: 2



Treatment Train Effectiveness - Receiving Node

	Sources	Residual Load	% Reduction
Flow (ML/yr)	3.23	2.93	9.1
Total Suspended Solids (kg/yr)	580	86.5	85.1
Total Phosphorus (kg/yr)	1.06	0.276	74.1
Total Nitrogen (kg/yr)	7.17	3.42	52.3
Gross Pollutants (kg/yr)	78.5	3.31	95.8